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Natural
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Conservation
Service

In cooperation with
United States Department
of the Interior, Bureau of
Land Management;
United States Department of
Agriculture, Forest Service;
University of Idaho, College
of Agriculture; and Idaho Soil
Conservation Commission

Soil Survey of Oneida County Area, Idaho



How To Use This Soil Survey

General Soil Map

The general soil map, which is a color map, shows the survey area divided into groups of associated soils called general soil map units. This map is useful in planning the use and management of large areas.

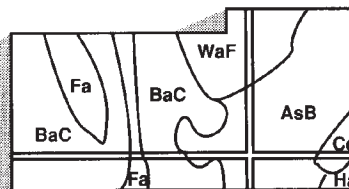
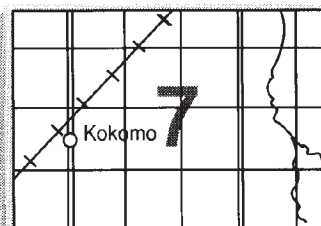
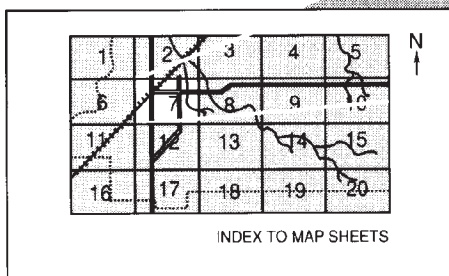
To find information about your area of interest, locate that area on the map, identify the name of the map unit in the area on the color-coded map legend, then refer to the section **General Soil Map Units** for a general description of the soils in your area.

Detailed Soil Maps

The detailed soil maps can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.



NOTE: Map unit symbols in a soil survey may consist only of numbers or letters, or they may be a combination of numbers and letters.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey.

Major fieldwork for this soil survey was completed in 1990. Soil names and descriptions were approved in 1992. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1992. This survey was made cooperatively by the Natural Resources Conservation Service and the Bureau of Land Management; the Forest Service; the University of Idaho, College of Agriculture; and the Idaho Soil Conservation Commission. The survey is part of the technical assistance furnished to the Oneida Soil and Water Conservation District.

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

The most current soil information and interpretations for this survey area are available either through the Soil Data Mart or in the Field Office Technical Guide (FOTG) at the local field office of the Natural Resources Conservation Service. The Soil Data Mart is the Natural Resources Conservation Service data storage site for the official soil survey information. The FOTG is linked to the Soil Data Mart; therefore, the same information is available from both sources. Soil survey maps and tabular data can be accessed through the Soil Data Mart at <http://soildatamart.nrcs.usda.gov>. The official soil survey information stored at the Soil Data Mart and this soil survey report are also available through Web Soil Survey at <http://soils.usda.gov/survey>.

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Cover: Samaria and Sterling soils in foreground, Parleys and Welby soils on terraces in background, and Ridgecrest and Hymas soils on mountains in background.

Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service at <http://www.nrcs.usda.gov>.

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Foreword

This soil survey contains information that affects land use planning in this survey area. It contains predictions of soil behavior for selected land uses. The survey also highlights soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

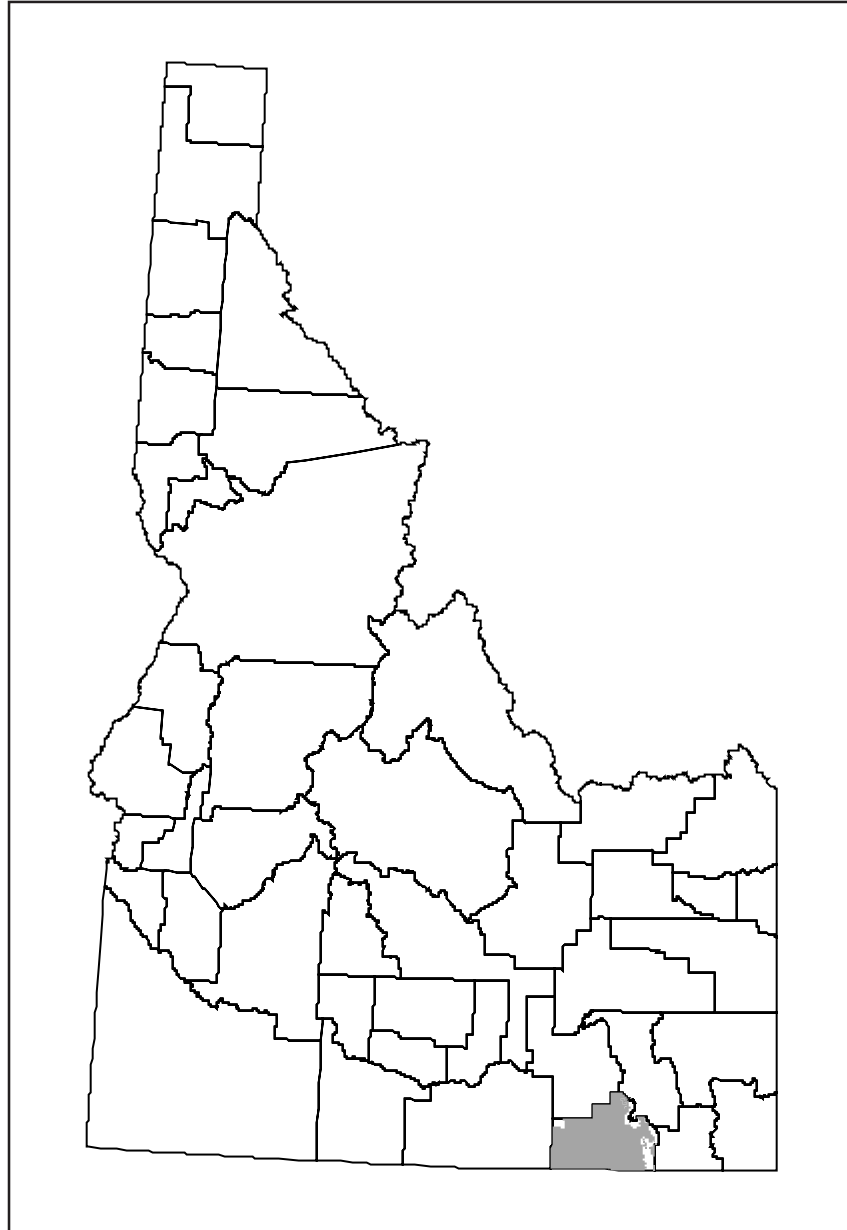
This soil survey is designed for many different users. Farmers, ranchers, foresters, and agronomists can use it to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the survey to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the survey to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are shallow to bedrock. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. Broad areas of soils are shown on the general soil map. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described. Information on specific uses is given for each soil. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Richard W. Sims
State Conservationist
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Location of Oneida County Area in Idaho.

Soil Survey of Oneida County Area, Idaho

By Shawn McVey, Natural Resources Conservation Service

Fieldwork by Ray Grow, Rulon Winward, Grant Butler, Mike Petersen, Larry Lang, Charles McCarver, and Chad McGrath, Natural Resources Conservation Service; Leland Sasser, Warren Archer, Mary Spencer, and Ken Adams, Idaho Soil Conservation Commission; and Dean Davidson, Forest Service

United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with
United States Department of the Interior, Bureau of Land Management; United States Department of Agriculture, Forest Service; University of Idaho, College of Agriculture; and Idaho Soil Conservation Commission

ONEIDA COUNTY AREA is in the southeastern part of Idaho. It includes all of Oneida County except the part that is in Caribou National Forest. The Curlew National Grasslands is included in the survey area. The total area is 679,000 acres, or about 1,060 square miles. In 1990 the population of Malad City, the county seat, was about 2,000.

The survey area consists mainly of north-south trending valleys and mountain ranges. The Sublett and Deep Creek Ranges are in the western one-third of the county, and they are surrounded by Curlew Valley. The Samaria and Promontory Ranges are in the south-central part of the county, and Pocatello Valley is between these mountain ranges. On the eastern side of the county are the Elk Horn Mountains to the north and the Malad Range to the south. Malad Valley, which is one of the northernmost reaches of Old Lake Bonneville, is between Samaria Mountain and the Malad Range. The Malad River, a major stream in the survey area, flows out of the northern mountain valleys and winds through the lake plains of Malad Valley. Another major stream, Deep Creek, runs through the lake plains of Curlew Valley, in the central part of the survey area.

The lowest point in the survey area, about 4,300 feet, is in the southern part of Malad Valley. The highest point, about 7,700 feet, is on Samaria Mountain.

This survey provides information about soils that is useful in land use management. The survey area was mapped at two levels of detail. The areas of cropland and wetland were mapped at the more detailed level, and the areas of rangeland were mapped at the less detailed level.

General Nature of the Survey Area

This section gives general information about the survey area. It discusses history and development, natural resources, agriculture, and climate.

History and Development

Very little is known about the original inhabitants of Malad Valley. Native American folklore provides some insight into their history, but it is not conclusive in determining historical fact. The Native Americans in the valley belonged to a northern tribe of the Shoshonean family.

In the early 1800's, the St. Louis Missouri Fur Company sent parties to the Malad area to trap fur-bearing animals. One of the earliest accounts of the exploration of Malad Valley is a report by William Ashley dated December 1, 1825. Other early explorers were Jim Bridger and Peter Skene Ogden.

The first European to settle permanently in Malad Valley was A.W. Vanderwood in 1863. Two years later the Church of Jesus Christ of Latter Day Saints sent families from Salt Lake City, Utah, to settle in Malad Valley.

In January 1864, the first session of the Idaho Legislature met at Lewiston, Idaho. One of the first acts was the creation of Oneida County with the county seat at Soda Springs. In 1866, the county seat was moved to Malad City. At that time Oneida County included the present-day counties of Bannock, Bear Lake, Franklin, Madison, Caribou, Teton, Fremont, Bingham, Power, and Bonneville. The first courthouse in the county, one of the first in Idaho, was built in 1882 at a cost of \$12,000.

Farming was the main source of income for the first few years, but then for a period of about 15 years an infestation of grasshoppers and crickets kept families from making a living raising crops. During this time, men found work in the mines at Butte, Montana, or as laborers for the railroad being built across the continent. Many of the men also made a living freighting; however, in 1879 the Utah Northern Railroad came to northern Utah and put an end to most freighting. At about this time, the grasshoppers and crickets disappeared and farming again became a means of making a living. For almost two decades, the population stayed about the same while the people developed their farms, ranches, and community.

The early settlers diverted water for irrigation from Devil and Marsh Creeks. By the early 1870's all the most desirable land and irrigation water had been claimed, so some farmers began successful dry-farm operations. As the farmers became more familiar with the different methods of cultivation, the farms became more successful.

With the vast ranges of grass and sufficient water, the cattle industry became an important part of the economy in the county. Cattle associations were formed primarily for protection against rustling. Other goals of the associations included improving rangeland and increasing sales. In the winter of 1886-1887, a severe ice storm killed many of the cattle. The Promontory Cattle Company had 30,000 head of cattle and lost all but 800 head during the storm, which they shipped to Brigham City by railroad to feed for the rest of the winter. This storm led to the further development of dryland farming.

On January 1, 1906, a branch of the Oregon Short Line Railroad brought the first train to Malad City, connecting Corinne, Utah, to Malad City, and bringing new prosperity. The population of 1,300 doubled during the 10-year period from 1910 to 1920.

Transportation presently is provided by the railroad, highways, and a small airport in Malad City. Interstate Highway 15 runs the length of Oneida County, from the Utah State line to Bannock County.

Natural Resources

Soil and water are the most important natural resources in the survey area. Among the marketable products are small grain and hay, livestock, gravel, and pumice.

Water in the survey area is used primarily for domestic purposes, livestock, and

irrigation. Springs and deep wells supply most of the water used for domestic purposes. Perennial streams and spring developments provide adequate supplies of water for livestock in most parts of the survey area. Irrigation water in Malad Valley is provided by Deep Creek, Devil Creek, and Daniels Reservoir. In the Holbrook and Juniper areas, water is supplied primarily by deep wells. Water for the Stone Area is supplied by deep wells and by Curlew Reservoir. Water is also diverted from major streams in the survey area to irrigate small acreages of the bottomland.

Pumice is the main mining product in the survey area. Deposits of pumice are abundant in the Daniels and Dairy Creek areas. Pumice from the survey area is shipped around the world. It is used in cleanser abrasives, paint pigment, glue components, and potting soil. Some sand and gravel is also mined.

Agriculture

The farming and ranching industries in the survey area have flourished since the construction of the railroad. The first settlers were primarily ranchers, but they soon discovered that the soil in the area is quite fertile. Farmers began to plow up the sagebrush and plant crops. With the development of the tractor and bigger and better machinery, especially after World War II, large acreages of rangeland were converted to cropland. The majority of the cropland in the survey area is nonirrigated; the irrigated areas are primarily in Curlew and Malad Valleys.

Drought and frost in the survey area limit the production of most crops. Wheat, barley, and small amounts of alfalfa are the dominant crops raised in the nonirrigated areas. Wheat, barley, alfalfa, and some potatoes are the major crops grown in the irrigated areas. Some meadow hay is grown in an area south of Malad City, along the Malad River. Most of the operations in the area are a combination of farming and livestock operations.

Most of the nonirrigated cropland in the survey area is in gently sloping to moderately steep areas. As early as 1930, farmers observed the erosion and siltation along the streams as land was converted from rangeland to cropland. They realized the need for soil and water conservation and for control of the devastating effects of soil erosion. The Oneida Soil and Water Conservation District was established May 22, 1940.

Climate

Table 1 gives data on temperature and precipitation for the survey area as recorded at Malad City, Idaho, in the period 1948 to 1991. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on length of the growing season.

In winter, the average temperature is 24 degrees F and the average daily minimum temperature is 12 degrees. The lowest temperature on record, which occurred on February 6, 1982, is -35 degrees. In summer, the average temperature is 66 degrees and the average daily maximum temperature is 86 degrees. The highest recorded temperature, which occurred on August 9, 1990, is 102 degrees.

Growing degree days are shown in table 1. They are equivalent to "heat units." During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (40 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total annual precipitation is about 13.53 inches. Of this, 7 inches, or 52 percent, usually falls in April through September. The growing season for most crops falls within this period. In 2 years out of 10, the rainfall in April through September is less than 2.31 inches. The heaviest 1-day rainfall during the period of

record was 2.13 inches on July 22, 1979. Thunderstorms occur on about 24 days each year, and most occur in July.

The average seasonal snowfall is about 41 inches. The greatest snow depth at any one time during the period of record was 44 inches. On the average, 76 days of the year have at least 1 inch of snow on the ground. The number of such days varies greatly from year to year.

The average relative humidity in midafternoon is about 44 percent. Humidity is higher at night, and the average at dawn is about 72 percent. The sun shines 79 percent of the time possible in summer and 44 percent in winter. The prevailing wind is from the southwest. Average windspeed is highest, 12 miles per hour, in April.

How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept or model of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil

scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

General Soil Map Units

The general soil map in this publication shows broad areas that have a distinctive pattern of soils, relief, and drainage. Each map unit on the general soil map is a unique natural landscape. Typically, it consists of one or more major soils or miscellaneous areas and some minor soils or miscellaneous areas. It is named for the major soils or miscellaneous areas. The components of one map unit can occur in another but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the map. Likewise, areas where the soils are not suitable can be identified.

Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road or building or other structure. The soils in any one map unit differ from place to place in slope, depth, drainage, and other characteristics that affect management.

1. Ridgecrest-Hondoho-Hymas

Very deep, moderately deep, and shallow, moderately sloping to very steep, well drained soils that formed in colluvium and residuum derived primarily from limestone and alluvium from mixed sources

Percentage of survey area: 37 percent

Landform: Ridgecrest—mountains; Hondoho—mountains, hills, and fan remnants;

Hymas—mountains and ridges

Elevation: 5,000 to 7,500 feet

Frost-free period: 70 to 100 days

Mean annual precipitation: 12 to 18 inches

Minor components: Calpac, Manila, Pavohroo, and Povey soils

Major uses: Nonirrigated cropland, nonirrigated hayland, and rangeland

2. Lonigan-Copenhagen-Manila

Very deep, moderately deep, and shallow, gently sloping to steep, well drained soils that formed in alluvium, residuum, and colluvium derived from tuff, tuffaceous limestone, and loess

Percentage of survey area: 3 percent

Landform: Lonigan—mountains; Copenhagen—mountains and ridges; Manila—fan remnants, hills, and mountains

Elevation: 4,800 to 6,500 feet

Frost-free period: 70 to 95 days

Mean annual precipitation: 14 to 19 inches

Minor components: Lizdale, Pavohroo, and Stines soils

Major uses: Nonirrigated cropland and rangeland

3. Hutchley-McCarey-Araveton

Very deep, moderately deep, and shallow, gently sloping to steep, well drained soils that formed in loess, residuum, colluvium, and alluvium derived from basalt and other mixed igneous rock

Percentage of survey area: 3 percent

Landform: Hutchley—hills on lava plains; McCarey—undulating lava plains; Araveton—fan remnants and lava plains

Elevation: 4,900 to 6,200 feet

Frost-free period: 55 to 100 days

Mean annual precipitation: 12 to 16 inches

Minor components: Raldrige soils

Major uses: Rangeland and nonirrigated cropland

4. Arbone-Rexburg-Hondoho

Very deep, nearly level to gently sloping, well drained soils that formed in alluvium and loess derived from mixed sources

Percentage of survey area: 15 percent

Landform: Arbone—fan remnants; Rexburg—fan remnants and hills; Hondoho—hills and fan remnants

Elevation: 5,000 to 6,700 feet

Frost-free period: 75 to 100 days

Mean annual precipitation: 12 to 18 inches

Minor components: Cedarhill, Justesen, Lanoak, and Ririe soils

Major uses: Irrigated and nonirrigated cropland, nonirrigated hayland and pastureland, and rangeland

5. Ririe-Rexburg-Cedarhill

Very deep, nearly level to steep, well drained soils that formed in alluvium and loess derived from mixed sources and in alluvium and colluvium derived from limestone, quartzite, and sandstone

Percentage of survey area: 6 percent

Landform: Ririe—hills and fan remnants; Rexburg—fan remnants and hills; Cedarhill—fan remnants and mountains

Elevation: 5,000 to 6,500 feet

Frost-free period: 70 to 100 days

Mean annual precipitation: 12 to 17 inches

Minor components: Iphil, Watercanyon, and Wursten soils

Major uses: Nonirrigated cropland, nonirrigated hayland, and rangeland

6. Manila-Elevator-Jensen

Very deep, nearly level to steep, well drained and moderately well drained soils that formed in alluvium, colluvium, and lacustrine deposits derived from mixed sources and limestone, quartzite, sandstone, and tuff

Percentage of survey area: 8 percent

Landform: Manila—fan remnants; Elevator—lake terraces; Jensen—fan remnants and lake terraces

Elevation: 4,900 to 6,500 feet

Frost-free period: 70 to 100 days

Mean annual precipitation: 13 to 19 inches

Minor components: Broadhead, Thatcher, and Yago soils

Major uses: Irrigated and nonirrigated cropland, nonirrigated hayland, and rangeland

7. Parleys-Kearns-Tirod

Very deep, nearly level to strongly sloping, well drained soils that formed in alluvium and lacustrine deposits derived from mixed sources and quartzite

Percentage of the survey area: 7 percent

Landform: Parleys and Kearns—lake terraces; Tirod—fan remnants and lake terraces

Elevation: 4,300 to 5,200 feet

Frost-free period: 100 to 130 days

Mean annual precipitation: 12 to 16 inches

Minor components: Buckboard, Neeley, Welby, and Wheelon soils

Major uses: Irrigated and nonirrigated cropland and hayland

8. Hans-Collinston-Hillfield

Very deep, nearly level to steep, well drained soils that formed in lacustrine deposits derived from mixed sources and tuff, tuffaceous sandstone, limestone, and conglomerate

Percentage of survey area: 2 percent

Landform: Hans and Collinston—lake terraces; Hillfield—dissected lake terraces

Elevation: 4,400 to 5,500 feet

Frost-free period: 110 to 130 days

Mean annual precipitation: 13 to 16 inches

Minor components: Kearns, Kucera, Parleys, and Welby soils

Major uses: Irrigated and nonirrigated cropland and hayland, and rangeland

9. Samaria-Sterling-Kidman

Very deep, nearly level to moderately steep, well drained soils that formed in lacustrine deposits and alluvium derived from mixed sources

Percentage of survey area: 7 percent

Landform: Samaria—lake terraces and fan remnants; Kidman—lake terraces; Sterling—fan remnants and hills

Elevation: 4,500 to 5,500 feet

Frost-free period: 100 to 120 days

Mean annual precipitation: 12 to 16 inches

Minor components: DeJarnet, Highcreek, Pollynnot, and Tickason soils

Major uses: Irrigated and nonirrigated cropland and hayland, and rangeland

10. Ecur-Darkbull

Very deep, nearly level to moderately steep, well drained soils that formed in alluvium and lacustrine deposits with loess influence derived from sedimentary rock and in alluvium derived from mixed sources

Percentage of survey area: 2 percent

Landform: Ecur—lake terraces and fan remnants; Darkbull—fan remnants

Elevation: 4,400 to 5,000 feet

Frost-free period: 100 to 120 days

Mean annual precipitation: 10 to 13 inches

Minor components: Bayhook, DeJarnet, and Pyrat soils

Major uses: Rangeland and irrigated cropland

11. Bayhook-Freedom-Mellor

Very deep, nearly level to gently sloping, well drained soils that are slightly affected by salts and sodium and formed in lacustrine deposits and alluvium derived from mixed sources and sedimentary rock

Percentage of survey area: 6 percent

Landform: Lake terraces

Elevation: 4,300 to 4,700 feet

Frost-free period: 100 to 130 days

Mean annual precipitation: 8 to 12 inches

Minor components: Ecur soils

Major uses: Nonirrigated and irrigated cropland, hayland, and pastureland, and rangeland

12. Logan-Goosenawt-Jovine

Very deep, nearly level to gently sloping, well drained, moderately well drained, and poorly drained soils that formed in alluvium and lacustrine deposits derived from mixed sources

Percentage of survey area: 4 percent

Landform: Logan—lake terraces and flood plains; Goosenawt—flood plains; Jovine—depressions and low stream terraces

Elevation: 4,300 to 5,200 feet

Frost-free period: 80 to 130 days

Mean annual precipitation: 12 to 16 inches

Minor components: Bloor, Brinnum, Fridlo, Lagonot, and Langless soils

Major uses: Irrigated and nonirrigated cropland and hayland, irrigated pastureland, and rangeland

Detailed Soil Map Units

The map units delineated on the detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses.

A map unit delineation on a map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to other taxonomic classes.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, inclusions. They may or may not be mentioned in the map unit description. Other included soils and miscellaneous areas, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, inclusions. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The included areas of contrasting soils or miscellaneous areas are mentioned in the map unit descriptions. A few included areas may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of included areas in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness,

salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Arbone silt loam, 0 to 4 percent slopes, is a phase of the Arbone series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes or associations.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Araveton-Hades complex, 4 to 12 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Calpac-Ridgecrest-Ireland association, 40 to 70 percent slopes, is an example.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Dumps, mine, is an example.

Table 4 gives the acreage and proportionate extent of each map unit. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

1—Araveton-Hades complex, 4 to 12 percent slopes

Composition

Araveton and similar soils—50 percent

Hades and similar soils—25 percent

Minor components—25 percent

Setting

Landform: Plains and fan remnants

Elevation: 4,900 to 6,500 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 44 degrees F

Frost-free period—75 to 100 days

Characteristics of Araveton

Position on landscape: Concave slopes

Typical profile:

0 to 8 inches—grayish brown silt loam

8 to 36 inches—brown silt loam

36 to 62 inches—pale brown and very pale brown gravelly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 10.5 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Hades

Position on landscape: Smooth slopes

Typical profile:

0 to 20 inches—dark grayish brown and grayish brown silt loam

20 to 42 inches—brown silty clay loam

42 to 60 inches—yellowish brown gravelly silty clay loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 10.8 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Cedarhill soils on south-facing, concave slopes (5 percent)
- Hondoho soils on smooth or concave slopes (5 percent)
- Jensen soils on smooth or concave, north-facing slopes (5 percent)
- Ririe soils on convex slopes (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (5 percent)

Use and Management

Major use: Nonirrigated cropland

Major management factors: Growing season, water erosion, and slope

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Minimize the risk of erosion by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, and maintaining crop residue on the soil surface.

Interpretive Groups

Land capability classification: 3e, nonirrigated

2—Arbone silt loam, 0 to 4 percent slopes

Composition

*Arbone and similar soils—*75 percent

*Minor components—*25 percent

Setting

Landform: Fan remnants

Elevation: 5,000 to 5,700 feet

Climatic data (mean annual):

Precipitation—about 14 inches

Air temperature—about 44 degrees F

Frost-free period—75 to 100 days

Characteristics of Arbone

Typical profile:

0 to 15 inches—grayish brown silt loam

15 to 60 inches—brown, light brownish gray, and very pale brown gravelly silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 8.7 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—slight

Minor Components

- Darkbull soils on backslopes of terraces (5 percent)
- Rexburg soils on slightly convex slopes (10 percent)
- Ridgecrest soils on adjacent mountains near the edges of areas of this unit (5 percent)
- Soils that have slopes of more than 4 percent (5 percent)

Use and Management

Major uses: Nonirrigated cropland, hayland, and pastureland

Major management factors: Growing season and depth to carbonates

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Conserve moisture by chiseling stubble fields on the contour or across the slope in fall and by maintaining crop residue on the soil surface.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.

Nonirrigated hayland and pastureland

Suitable crops: Alfalfa hay and grasses

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay and forage, conservation practices such as managing nutrients and maintaining plant vigor are needed.
- Fencing, livestock watering facilities, and a planned grazing system are needed in areas used for pasture.

Interpretive Groups

Land capability classification: 3c, nonirrigated

3—Arbone silt loam, 4 to 12 percent slopes

Composition

*Arbone and similar soils—*90 percent

*Minor components—*10 percent

Setting

Landform: Fan remnants

Elevation: 5,000 to 5,700 feet

Climatic data (mean annual):

Precipitation—about 14 inches

Air temperature—about 44 degrees F

Frost-free period—75 to 100 days

Characteristics of Arbone

Typical profile:

0 to 15 inches—grayish brown silt loam

15 to 60 inches—brown, light brownish gray, and very pale brown gravelly silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 8.7 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Hondo soils on convex slopes (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (5 percent)

Use and Management

Major uses: Nonirrigated cropland, hayland, and pastureland

Major management factors: Growing season, depth to carbonates, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Reduce the risk of water erosion by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, and maintaining crop residue on the soil surface.

Nonirrigated hayland and pastureland

Suitable crops: Alfalfa hay and grasses

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay and forage, conservation practices such as managing nutrients and maintaining plant vigor are needed.
- Fencing, livestock watering facilities, and a planned grazing system are needed in areas used for pasture.

Interpretive Groups

Land capability classification: 3e, nonirrigated

4—Arbone silt loam, 12 to 20 percent slopes

Composition

*Arbone and similar soils—*85 percent

*Minor components—*15 percent

Setting

Landform: Fan remnants

Elevation: 5,000 to 5,700 feet

Climatic data (mean annual):

Precipitation—about 14 inches

Air temperature—about 44 degrees F

Frost-free period—75 to 100 days

Characteristics of Arbone*Typical profile:*

0 to 15 inches—grayish brown silt loam

15 to 60 inches—brown, light brownish gray, and very pale brown gravelly silt loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderate*Available water capacity:* 8.7 inches*Potential rooting depth:* 60 inches or more*Runoff:* Medium*Hazard of erosion:* By water—severe**Minor Components**

- Hondoho soils on convex slopes (5 percent)
- Ririe soils on slightly concave slopes and Neeley soils on smooth to convex slopes (5 percent)
- Soils that have slopes of less than 12 percent or more than 20 percent (5 percent)

Use and Management*Major uses:* Nonirrigated cropland and rangeland*Major management factors:* Growing season, depth to carbonates, water erosion, and slope**Nonirrigated cropland***Suitable crops:* Wheat and barley*General management considerations:*

- The short growing season limits the choice of crops.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by chiseling stubble fields on the contour or across the slope in fall and by maintaining crop residue on the soil surface.

Rangeland*Dominant vegetation in natural potential plant community:* Mountain big sagebrush and bluebunch wheatgrass*General management considerations:*

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Seeding of adapted species to improve the rangeland is limited by water erosion.

Interpretive Groups*Land capability classification:* 4e, nonirrigated*Ecological site:* Loamy, 13- to 16-inch precipitation zone

5—Arbone-Hondoho-Cedarhill complex, 4 to 12 percent slopes

Composition

Arbone and similar soils—35 percent
Hondoho and similar soils—30 percent
Cedarhill and similar soils—20 percent
Minor components—15 percent

Setting

Landform: Plains and fan remnants
Elevation: 5,000 to 6,700 feet
Climatic data (mean annual):
 Precipitation—about 15 inches
 Air temperature—about 43 degrees F
 Frost-free period—75 to 100 days

Characteristics of Arbone

Position on landscape: Southwest-facing slopes
Typical profile:
 0 to 15 inches—grayish brown silt loam
 15 to 60 inches—brown, light brownish gray, and very pale brown gravelly silt loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: 8.7 inches
Potential rooting depth: 60 inches or more
Runoff: Medium
Hazard of erosion: By water—moderate

Characteristics of Hondoho

Position on landscape: South-facing slopes
Typical profile:
 0 to 14 inches—grayish brown gravelly silt loam
 14 to 28 inches—pale brown very cobbly loam
 28 to 60 inches—very pale brown very cobbly loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: 5.8 inches
Potential rooting depth: 60 inches or more
Runoff: Medium
Hazard of erosion: By water—moderate

Characteristics of Cedarhill

Position on landscape: South- and west-facing slopes
Typical profile:
 0 to 7 inches—grayish brown gravelly silt loam
 7 to 12 inches—light brownish gray gravelly loam

12 to 27 inches—very pale brown very gravelly loam

27 to 60 inches—very pale brown extremely cobbly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 4.9 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Ridgecrest soils on ridges and backslopes (5 percent)
- Ririe soils on backslopes (3 percent)
- Toefoot soils in depressions (3 percent)
- Rexburg soils in depressions (2 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (2 percent)

Use and Management

Major uses: Nonirrigated cropland and hayland

Major management factors: Growing season, depth to carbonates, rock fragments on the surface in some areas, available water capacity in some areas, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Rock fragments on the surface make seedbed preparation difficult.
- Minimize the risk of erosion and conserve moisture by constructing terraces, chiseling or subsoiling fields on the contour or across the slope in fall, and maintaining crop residue on the soil surface.

Nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as managing nutrients and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: Arbone and Hondoho—3e, nonirrigated; Cedarhill—4e, nonirrigated

6—Arbone-Hondoho-Cedarhill complex, 12 to 30 percent slopes

Composition

Arbone and similar soils—45 percent

Hondoho and similar soils—25 percent

Cedarhill and similar soils—20 percent

Minor components—10 percent

Setting

Landform: Plains and fan remnants

Elevation: 5,000 to 6,700 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free period—75 to 100 days

Characteristics of Arbone

Position on landscape: Southwest-facing, smooth or concave slopes

Typical profile:

0 to 15 inches—grayish brown and brown silt loam

15 to 60 inches—brown and very pale brown gravelly silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 8.4 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—severe

Characteristics of Hondoho

Position on landscape: Concave slopes

Typical profile:

0 to 14 inches—grayish brown gravelly silt loam

14 to 28 inches—pale brown very cobbly loam

28 to 60 inches—very pale brown very cobbly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 5.8 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—severe

Characteristics of Cedarhill

Position on landscape: Convex slopes

Typical profile:

0 to 7 inches—grayish brown gravelly silt loam

7 to 12 inches—light brownish gray gravelly loam

12 to 27 inches—very pale brown very gravelly loam

27 to 60 inches—very pale brown extremely cobbly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 4.9 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—severe

Minor Components

- Justesen soils in depressions and on toeslopes (3 percent)
- Toefoot soils in depressions (3 percent)
- Soils that have slopes of less than 12 percent or more than 30 percent (2 percent)

- Watercanyon soils on convex toeslopes (2 percent)

Use and Management

Major use: Nonirrigated cropland

Major management factors: Growing season, depth to carbonates, rock fragments on the surface in some areas, available water capacity in some areas, water erosion, and slope

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Rock fragments on the surface make seedbed preparation difficult.
- Minimize the risk of erosion and conserve moisture by chiseling stubble fields on the contour or across the slope in fall and by maintaining crop residue on the soil surface.

Interpretive Groups

Land capability classification: 4e, nonirrigated

7—Bayhook silt loam, 0 to 2 percent slopes

Composition

*Bayhook and similar soils—*90 percent

*Minor components—*10 percent

Setting

Landform: Lake terraces

Elevation: 4,400 to 4,700 feet

Climatic data (mean annual):

Precipitation—about 10 inches

Air temperature—about 47 degrees F

Frost-free period—110 to 130 days

Characteristics of Bayhook

Typical profile:

0 to 7 inches—light brownish gray silt loam

7 to 13 inches—light brownish gray and pale brown silt loam

13 to 60 inches—light gray and pale yellow silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—none or slight; by wind—moderate

Minor Components

- Ecur soils on low terraces (5 percent)
- Pyrat soils on low terraces (3 percent)
- Small areas of saline soils on concave slopes (2 percent)

Use and Management

Major uses: Rangeland and irrigated cropland

Major management factors: Depth to carbonates and wind erosion

Rangeland

Dominant vegetation in natural potential plant community: Basin big sagebrush and bluebunch wheatgrass

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Seeding of adapted species to improve the range is limited by wind erosion and low precipitation.

Irrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion and conserve moisture by planting crops in narrow strips at right angles to the prevailing wind, subsoiling, and maintaining crop residue on the soil surface.

Interpretive Groups

Land capability classification: 3s, irrigated, and 6s, nonirrigated

Ecological site: Loamy, 8- to 11-inch precipitation zone

8—Bayhook-Ecur complex, 0 to 4 percent slopes

Composition

*Bayhook and similar soils—*55 percent

*Ecur and similar soils—*35 percent

*Minor components—*10 percent

Setting

Landform: Lake terraces

Elevation: 4,400 to 5,000 feet

Climatic data (mean annual):

Precipitation—about 11 inches

Air temperature—about 47 degrees F

Frost-free period—100 to 130 days

Characteristics of Bayhook

Position on landscape: Smooth slopes

Typical profile:

0 to 7 inches—light brownish gray silt loam

7 to 13 inches—light brownish gray and pale brown silt loam

13 to 60 inches—light gray and pale yellow silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—slight; by wind—moderate

Characteristics of Ecur

Position on landscape: Smooth or slightly convex slopes

Typical profile:

0 to 15 inches—light brownish gray fine sandy loam

15 to 37 inches—light gray fine sandy loam

37 to 44 inches—light gray loamy fine sand

44 to 49 inches—light gray gravelly loamy fine sand

49 to 60 inches—light gray loamy fine sand

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately rapid

Available water capacity: 6.7 inches

Potential rooting depth: 60 inches or more

Runoff: Very low

Hazard of erosion: By water—slight; by wind—severe

Minor Components

- Darkbull soils on low terraces (5 percent)
- Pyrat soils on low terraces (5 percent)

Use and Management

Major use: Rangeland

Major management factors: Wind erosion

Dominant vegetation in natural potential plant community: Basin big sagebrush and bluebunch wheatgrass

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Seeding of adapted species to improve the range is limited by low precipitation and wind erosion.

Interpretive Groups

Land capability classification: Bayhook—6s, nonirrigated; Ecur—6c, nonirrigated

Ecological site: Bayhook—Loamy, 8- to 11-inch precipitation zone; Ecur—Loamy, 11- to 13-inch precipitation zone

9—Bingham gravelly loam, 1 to 4 percent slopes

Composition

*Bingham and similar soils—*90 percent

*Minor components—*10 percent

Setting

Landform: Lake terraces

Elevation: 4,500 to 4,900 feet

Climatic data (mean annual):

Precipitation—about 13 inches

Air temperature—about 47 degrees F

Frost-free period—100 to 120 days

Characteristics of Bingham

Typical profile:

0 to 6 inches—grayish brown gravelly loam

6 to 27 inches—grayish brown and yellowish brown gravelly loam

27 to 38 inches—light yellowish brown very gravelly sandy loam

38 to 65 inches—very pale brown very gravelly loamy sand and variegated very gravelly loamy coarse sand

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate in the upper part and very rapid in the lower part

Available water capacity: 4.7 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—slight

Minor Components

- Kidman soils on convex slopes (5 percent)
- Tirod soils on smooth slopes (5 percent)

Use and Management

Major uses: Irrigated cropland and hayland

Major management factors: Rock fragments on the surface and available water capacity

Irrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- Rock fragments on the surface make seedbed preparation difficult.

Irrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as managing nutrients and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: 3s, irrigated, and 6s, nonirrigated

10—Bingham-Tirod complex, 0 to 2 percent slopes

Composition

Bingham and similar soils—45 percent

Tirod and similar soils—35 percent

Minor components—20 percent

Setting

Landform: Fan remnants and lake terraces

Elevation: 4,300 to 5,000 feet

Climatic data (mean annual):

Precipitation—about 14 inches
 Air temperature—about 47 degrees F
 Frost-free period—100 to 130 days

Characteristics of Bingham

Position on landscape: Smooth or convex slopes

Typical profile:

0 to 6 inches—grayish brown gravelly loam
 6 to 27 inches—grayish brown and yellowish brown gravelly loam
 27 to 38 inches—light yellowish brown very gravelly sandy loam
 38 to 65 inches—very pale brown very gravelly loamy sand and variegated very gravelly loamy coarse sand

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate in the upper part and very rapid in the lower part

Available water capacity: 4.7 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—none or slight

Characteristics of Tirod

Position on landscape: Smooth or concave slopes

Typical profile:

0 to 18 inches—grayish brown silt loam
 18 to 30 inches—light brownish gray loam
 30 to 40 inches—pale brown clay loam
 40 to 62 inches—very pale brown loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—none or slight

Minor Components

- Arbone soils on convex slopes near the edges of areas of this unit (10 percent)
- Highcreek soils on terrace breaks (5 percent)
- Soils that have slopes of more than 2 percent (5 percent)

Use and Management

Major uses: Irrigated cropland and hayland and building site development

Major management factors: Rock fragments on the surface in some areas and available water capacity in some areas

Irrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- Rock fragments on the surface make seedbed preparation difficult.

Irrigated hayland*Suitable crop:* Alfalfa hay*General management considerations:*

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system to adequately control irrigation water and to minimize water erosion, managing nutrients, and maintaining plant vigor are needed.

Building site development*General management consideration:*

- Onsite investigation is needed to determine whether the area considered for a septic tank absorption field is underlain by unsuitable material. If such material is present, consider placing absorption lines below it.

Interpretive Groups

Land capability classification: Bingham—3s, irrigated, and 6s, nonirrigated;
Tirod—2c, irrigated, and 3c, nonirrigated

11—Bloor-Brinnum complex, 0 to 2 percent slopes***Composition****Bloor and similar soils*—50 percent*Brinnum and similar soils*—35 percent*Minor components*—15 percent***Setting****Landform:* Lake plains and flood plains*Elevation:* 4,300 to 4,500*Climatic data (mean annual):*

Precipitation—about 11 inches

Air temperature—about 47 degrees F

Frost-free period—100 to 120 days

Characteristics of Bloor*Position on landscape:* Slightly convex slopes*Typical profile:*

0 to 12 inches—light brownish gray and light gray silt loam

12 to 20 inches—brown silt loam

20 to 29 inches—very pale brown silt loam

29 to 47 inches—pale yellow and light gray very fine sandy loam and fine sandy loam

47 to 60 inches—pale yellow silt loam

Depth class: Very deep*Drainage class:* Moderately well drained*Permeability:* Slow*Available water capacity:* 8.7 inches*Potential rooting depth:* 60 inches or more*Runoff:* Medium*Hazard of erosion:* By water—none or slight*Depth to water table:* 60 to 72 inches in January through May***Characteristics of Brinnum****Position on landscape:* Concave slopes

Typical profile:

- 0 to 9 inches—light brownish gray silt loam
- 9 to 31 inches—very pale brown and light brownish gray silt loam
- 31 to 60 inches—pale yellow silty clay loam

Depth class: Very deep*Drainage class:* Very poorly drained*Permeability:* Moderately slow*Available water capacity:* 5.7 inches*Potential rooting depth:* Water-tolerant plants—60 inches or more; non-water-tolerant plants—6 to 18 inches*Runoff:* Very low*Hazard of erosion:* By water—none or slight*Depth to water table:* 6 to 18 inches in September through May*Frequency of flooding:* Occasional**Minor Components**

- Logan soils in depressions (10 percent)
- Saline and sodic soils that are in concave slickspots and have a layer of clay accumulation at or near the surface (5 percent)

Use and Management*Major use:* Rangeland*Major management factors:* Salinity, sodicity, wetness, and flooding in some areas*Dominant vegetation in natural potential plant community:* Bloor—shadscale and bottlebrush squirreltail; Brinnum—black greasewood and alkali sacaton*General management considerations:*

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Production is limited mainly by the salinity, sodicity, and wetness.
- Periodic flooding on the Brinnum soil increases the amount of moisture available for plants and thus increases the amount of forage produced.

Interpretive Groups*Land capability classification:* Bloor—7s, nonirrigated; Brinnum—5w, nonirrigated*Ecological site:* Bloor—Alkali Flats, 8- to 12-inch precipitation zone; Brinnum—Semiwet Saline Meadow**12—Bothwell silt loam, 0 to 2 percent slopes****Composition***Bothwell and similar soils*—80 percent*Minor components*—20 percent**Setting***Landform:* Lake terraces*Elevation:* 4,900 to 5,900 feet*Climatic data (mean annual):*

Precipitation—about 16 inches

Air temperature—about 43 degrees F

Frost-free period—80 to 100 days

Characteristics of Bothwell*Typical profile:*

- 0 to 9 inches—brown silt loam

9 to 20 inches—grayish brown silt loam

20 to 45 inches—brown silty clay loam

45 to 60 inches—pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—slight

Minor Components

- Buckboard soils on slightly higher lying lake terraces (10 percent)
- Elevator soils on low lake terraces (5 percent)
- Jensen soils on slightly higher lying lake terraces (5 percent)

Use and Management

Major uses: Nonirrigated cropland and hayland

Major management factor: Growing season

Nonirrigated cropland

Suitable crops: Wheat and barley

General management consideration:

- The short growing season limits the choice of crops.

Nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as managing nutrients and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: 3c, nonirrigated

13—Bothwell-Hades-Justesen complex, 6 to 25 percent slopes

Composition

Bothwell and similar soils—35 percent

Hades and similar soils—30 percent

Justesen and similar soils—20 percent

Minor components—15 percent

Setting

Landform: Fan remnants

Elevation: 4,800 to 6,500 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 43 degrees F

Frost-free period—75 to 100 days

Characteristics of Bothwell

Position on landscape: Northeast- or east-facing, concave slopes

Typical profile:

- 0 to 9 inches—grayish brown silt loam
- 9 to 20 inches—dark grayish brown silt loam
- 20 to 45 inches—dark grayish brown and grayish brown silty clay loam
- 45 to 60 inches—yellowish brown silt loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderately slow*Available water capacity:* 12 inches*Potential rooting depth:* 60 inches or more*Runoff:* Medium*Hazard of erosion:* By water—severe**Characteristics of Hades***Position on landscape:* East-facing, concave slopes*Typical profile:*

- 0 to 20 inches—dark grayish brown and grayish brown silt loam
- 20 to 42 inches—brown silty clay loam
- 42 to 60 inches—yellowish brown gravelly silty clay loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderately slow*Available water capacity:* 10.8 inches*Potential rooting depth:* 60 inches or more*Runoff:* Medium*Hazard of erosion:* By water—severe**Characteristics of Justesen***Position on landscape:* Convex slopes*Typical profile:*

- 0 to 8 inches—grayish brown silt loam
- 8 to 16 inches—grayish brown silt loam
- 16 to 27 inches—brown silty clay loam
- 27 to 45 inches—light brown silt loam
- 45 to 60 inches—very pale brown gravelly loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderately slow*Available water capacity:* 10.7 inches*Potential rooting depth:* 60 inches or more*Runoff:* Medium*Hazard of erosion:* By water—severe**Minor Components**

- Hondoho soils on convex slopes and ridges (5 percent)
- Yago soils in convex, south-facing depressions (5 percent)
- Soils that have slopes of less than 6 percent or more than 25 percent (3 percent)
- Rexburg soils on convex slopes (2 percent)

Use and Management*Major uses:* Irrigated and nonirrigated cropland and hayland, and rangeland*Major management factors:* Growing season, water erosion, and slope**Irrigated and nonirrigated cropland***Suitable crops:* Wheat and barley

General management considerations:

- The most suitable irrigation method is a sprinkler system.
- The short growing season limits the choice of crops.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- Minimize the risk of erosion by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, and maintaining crop residue on the soil surface.

Irrigated and nonirrigated hayland*Suitable crop:* Alfalfa hay*General management considerations:*

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Rangeland*Dominant vegetation in natural potential plant community:* Mountain big sagebrush and bluebunch wheatgrass*General management considerations:*

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Seeding of adapted species to improve the rangeland is limited by water erosion.

Interpretive Groups*Land capability classification:* Bothwell, Hades, and Justesen—6e, irrigated, and 4e, nonirrigated*Ecological site:* Bothwell and Hades—Loamy, 16- to 22-inch precipitation zone; Justesen—Loamy, 13- to 16-inch precipitation zone**14—Brinnum-Logan-Langless complex, 0 to 2 percent slopes*****Composition****Brinnum and similar soils*—30 percent*Logan and similar soils*—30 percent*Langless and similar soils*—25 percent*Minor components*—15 percent***Setting****Landform:* Flood plains, lake terraces, and lake plains*Elevation:* 4,300 to 4,700 feet*Climatic data (mean annual):*

Precipitation—about 13 inches

Air temperature—about 47 degrees F

Frost-free period—100 to 130 days

Characteristics of Brinnum*Position on landscape:* Smooth or slightly concave slopes*Typical profile:*

0 to 9 inches—light brownish gray silt loam

9 to 31 inches—very pale brown and light brownish gray silt loam

31 to 60 inches—pale yellow silty clay loam

Depth class: Very deep

Drainage class: Very poorly drained

Permeability: Moderately slow

Available water capacity: 5.7 inches

Potential rooting depth: Water-tolerant plants—60 inches or more; non-water-tolerant plants—6 to 18 inches

Runoff: Negligible

Hazard of erosion: By water—none or slight

Depth to seasonal high water table: 6 to 18 inches in September through May

Frequency of flooding: Occasional

Characteristics of Logan

Position on landscape: Smooth slopes

Typical profile:

0 to 4 inches—slightly decomposed plant material

4 to 22 inches—gray silt loam

22 to 64 inches—gray and light gray silt loam

Depth class: Very deep

Drainage class: Poorly drained

Permeability: Moderately slow

Available water capacity: 13.8 inches

Potential rooting depth: Water-tolerant plants—60 inches or more; non-water-tolerant plants—0 to 18 inches

Runoff: Negligible

Hazard of erosion: By water—none or slight; by wind—moderate

Depth to seasonal high water table: At the surface to a depth of 18 inches below the surface in March through July

Frequency of flooding: Rare

Characteristics of Langless

Position on landscape: Smooth slopes

Typical profile:

0 to 3 inches—slightly decomposed plant material

3 to 9 inches—dark gray silt loam

9 to 47 inches—gray, white, and very pale brown silt loam

47 to 63 inches—light gray silt loam

Depth class: Very deep

Drainage class: Poorly drained

Permeability: Moderate

Available water capacity: 11 inches

Potential rooting depth: Water-tolerant plants—60 inches or more; non-water-tolerant plants—12 to 18 inches

Runoff: Negligible

Hazard of erosion: By water—none or slight

Depth to seasonal high water table: 12 to 18 inches in October through June

Frequency of flooding: Frequent

Minor Components

- Bloor soils near old oxbows (10 percent)
- Fridlo soils on slightly higher lying, raised mounds (5 percent)

Use and Management

Major uses: Irrigated and nonirrigated pastureland, and rangeland

Major management factors: Salinity, wetness, and flooding

Irrigated and nonirrigated pastureland*Suitable crops:* Water-tolerant grasses*General management considerations:*

- To maintain the quality of meadows and to produce good yields of forage, conservation practices such as using an irrigation system that adequately controls irrigation water, managing nutrients, and maintaining plant vigor are needed.
- Fencing, livestock watering facilities, and a planned grazing system should be used.
- The seasonal high water table provides supplemental moisture for plants.

Rangeland*Dominant vegetation in natural potential plant community:* Brinnum—black greasewood and alkali sacaton; Logan and Langless—sedges and tufted hairgrass*General management considerations:*

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Production is limited mainly by the salinity and wetness.
- Periodic flooding increases the amount of moisture available for plants and thus increases the amount of forage produced.
- Seeding of adapted species to improve the range is limited by wetness.

Interpretive Groups*Land capability classification:* 5w, irrigated and nonirrigated*Ecological site:* Brinnum—Semiwet Saline Meadow; Logan and Langless—Wet Meadow**15—Buckboard loam, 0 to 2 percent slopes*****Composition****Buckboard and similar soils*—80 percent*Minor components*—20 percent***Setting****Landform:* Lake terraces*Elevation:* 4,900 to 5,200 feet*Climatic data (mean annual):*

Precipitation—about 16 inches

Air temperature—about 43 degrees F

Frost-free season—80 to 100 days

Characteristics of Buckboard*Typical profile:*

0 to 15 inches—grayish brown loam

15 to 50 inches—brown, light brownish gray, and pale brown loam

50 to 65 inches—pale brown and light gray loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderately slow*Available water capacity:* 11.5 inches*Potential rooting depth:* 60 inches or more*Runoff:* Low*Hazard of erosion:* By water—none or slight

Minor Components

- Bothwell soils on slightly higher lying terrace slopes (10 percent)
- Elevator soils on low terrace slopes (10 percent)

Use and Management

Major uses: Nonirrigated cropland and hayland

Major management factor: Growing season

Nonirrigated cropland

Suitable crops: Wheat and barley

General management consideration:

- The short growing season limits the choice of crops.

Nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as managing nutrients and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: 3c, nonirrigated

16—Buist gravelly silt loam, 20 to 30 percent slopes

Composition

*Buist and similar soils—*75 percent

*Minor components—*25 percent

Setting

Landform: Fan remnants and mountains

Elevation: 5,000 to 6,000 feet

Climatic data (mean annual):

Precipitation—about 14 inches

Air temperature—about 42 degrees F

Frost-free period—85 to 95 days

Characteristics of Buist

Typical profile:

0 to 15 inches—brown gravelly silt loam

15 to 28 inches—very pale brown very gravelly loam

28 to 60 inches—very pale brown extremely gravelly fine sandy loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 5.9 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Minor Components

- Arbone soils on convex slopes (3 percent)
- Hondoho soils on concave slopes (5 percent)
- Kucera soils on concave terraces (10 percent)
- Rock outcrop on shoulder slopes (2 percent)

- Soils that have slopes of less than 20 percent or more than 30 percent (5 percent)

Use and Management

Major use: Rangeland

Major management factors: Rock fragments on the surface, available water capacity, and water erosion

Dominant vegetation in natural potential plant community: Basin big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by rock fragments on the surface and water erosion.
- Production is limited mainly by the restricted available water capacity.
- Use of equipment is limited by the rock fragments on the surface.

Interpretive Groups

Land capability classification: 6e, nonirrigated

Ecological site: Loamy, 12- to 16-inch precipitation zone

17—Calpac-Ridgecrest-Ireland association, 40 to 70 percent slopes

Composition

*Calpac and similar soils—*30 percent

*Ridgecrest and similar soils—*30 percent

*Ireland and similar soils—*25 percent

*Minor components—*15 percent

Setting

Landform: Mountains

Elevation: 5,200 to 7,200 feet

Climatic data (mean annual):

Precipitation—about 18 inches

Air temperature—about 42 degrees F

Frost-free period—70 to 90 days

Characteristics of Calpac

Position on landscape: Concave slopes

Typical profile:

0 to 8 inches—dark brown gravelly silt loam

8 to 15 inches—dark brown very gravelly silt loam

15 to 23 inches—brown extremely cobbly silt loam

23 to 60 inches—brown extremely cobbly silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 4.9 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Ridgecrest

Position on landscape: Convex slopes

Typical profile:

- 0 to 9 inches—grayish brown very gravelly silt loam
- 9 to 13 inches—grayish brown very cobbly silt loam
- 13 to 31 inches—grayish brown, yellowish brown, and light yellowish brown very cobbly loam
- 31 to 35 inches—very pale brown extremely cobbly sandy loam
- 35 inches—highly fractured limestone

Depth class: Moderately deep*Drainage class:* Well drained*Permeability:* Moderate*Available water capacity:* 3.6 inches*Potential rooting depth:* 20 to 40 inches*Runoff:* Very high*Hazard of erosion:* By water—severe***Characteristics of Ireland****Position on landscape:* North- and east-facing, convex slopes*Typical profile:*

- 0 to 8 inches—grayish brown very gravelly silt loam
- 8 to 28 inches—grayish brown and brown extremely cobbly silt loam
- 28 inches—highly fractured limestone

Depth class: Moderately deep*Drainage class:* Well drained*Permeability:* Moderate*Available water capacity:* 2 inches*Potential rooting depth:* 20 to 40 inches*Runoff:* Very high*Hazard of erosion:* By water—severe***Minor Components***

- Hymas soils on convex ridges (3 percent)
- Northwater soils in depressions (3 percent)
- Soils that have slopes of less than 40 percent (3 percent)
- Hondoho soils on slightly convex slopes and ridges (2 percent)
- Pavohroo soils in depressions (2 percent)
- Small areas of Rock outcrop near ridgetops (2 percent)

Use and Management*Major use:* Rangeland*Major management factors:* Rock fragments on the surface, available water capacity, water erosion, and slope*Dominant vegetation in natural potential plant community:* Mountain big sagebrush and bluebunch wheatgrass*General management considerations:*

- Seeding of adapted species to improve the range is limited by the rock fragments on the surface, water erosion, and slope.
- Uniform grazing is difficult because of the slope or the lack of permanent water developments, or both.
- Production is limited mainly by the restricted available water capacity.
- Use of equipment is limited by slope.

Interpretive Groups*Land capability classification:* 7e, nonirrigated*Ecological site:* Steep Slope, 16- to 22-inch precipitation zone

18—Cedarhill gravelly silt loam, 4 to 12 percent slopes

Composition

Cedarhill and similar soils—85 percent

Minor components—15 percent

Setting

Landform: Fan remnants

Elevation: 5,000 to 6,500 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 44 degrees F

Frost-free period—90 to 100 days

Characteristics of Cedarhill

Typical profile:

0 to 7 inches—grayish brown gravelly silt loam

7 to 12 inches—grayish brown gravelly loam

12 to 27 inches—light brownish gray very gravelly loam

27 to 60 inches—very pale brown extremely cobbly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 4.9 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Darkbull soils on south-facing backslopes (5 percent)
- Raldrige soils in depressions (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (5 percent)

Use and Management

Major uses: Nonirrigated cropland, nonirrigated hayland, and rangeland

Major management factors: Growing season, depth to carbonates, rock fragments on the surface, available water capacity, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Rock fragments on the surface make seedbed preparation difficult.
- Minimize the risk of erosion and conserve moisture by maintaining crop residue on the soil surface and constructing terraces, diversions, and grassed waterways.

Nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as managing nutrients and maintaining plant vigor are needed.

Rangeland

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Production is limited mainly by the restricted available water capacity.

Interpretive Groups

Land capability classification: 4e, nonirrigated

Ecological site: Gravelly Loam, 16- to 22-inch precipitation zone

19—Cedarhill gravelly silt loam, 12 to 30 percent slopes***Composition***

*Cedarhill and similar soils—*75 percent

*Minor components—*25 percent

Setting

Landform: Fan remnants and plains

Elevation: 5,000 to 6,500 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free period—90 to 100 days

Characteristics of Cedarhill

Typical profile:

0 to 7 inches—grayish brown gravelly silt loam

7 to 12 inches—grayish brown gravelly loam

12 to 27 inches—light brownish gray very gravelly loam

27 to 60 inches—very pale brown extremely cobbly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 4.9 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—severe

Minor Components

- Arbone soils on convex slopes (5 percent)
- Hondoho soils on convex slopes (5 percent)
- Ririe soils on backslopes (10 percent)
- Soils that have slopes of less than 12 percent or more than 30 percent (5 percent)

Use and Management

Major uses: Nonirrigated cropland, and rangeland

Major management factors: Growing season, depth to carbonates, rock fragments on the surface, available water capacity, water erosion, and slope

Nonirrigated cropland*Suitable crop:* Wheat*General management considerations:*

- The short growing season limits the choice of crops.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Rock fragments on the surface make seedbed preparation difficult.
- Minimize the risk of erosion and conserve moisture by maintaining crop residue on the soil surface and farming across the slope.

Rangeland*Dominant vegetation in natural potential plant community:* Mountain big sagebrush and bluebunch wheatgrass*General management considerations:*

- Seeding of adapted species to improve the range is limited by rock fragments on the surface and water erosion.
- Production is limited mainly by the restricted available water capacity.

Interpretive Groups*Land capability classification:* 4e, nonirrigated*Ecological site:* Gravelly Loam, 16- to 22-inch precipitation zone**20—Cedarhill-Hymas association, 20 to 55 percent slopes*****Composition****Cedarhill and similar soils—*45 percent*Hymas and similar soils—*30 percent*Minor components—*25 percent***Setting****Landform:* Mountains and ridges*Elevation:* 5,000 to 7,500 feet*Climatic data (mean annual):*

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free period—about 95 days

Characteristics of Cedarhill*Position on landscape:* Smooth or convex slopes*Typical profile:*

0 to 7 inches—grayish brown gravelly silt loam

7 to 12 inches—grayish brown gravelly loam

12 to 27 inches—light brownish gray very gravelly loam

27 to 60 inches—very pale brown extremely cobbly loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderate*Available water capacity:* 4.9 inches*Potential rooting depth:* 60 inches or more*Runoff:* Very high*Hazard of erosion:* By water—severe

Characteristics of Hymas

Position on landscape: West-facing slopes

Typical profile:

- 0 to 2 inches—grayish brown very cobbly loam
- 2 to 7 inches—brown very cobbly silt loam
- 7 to 11 inches—pale brown extremely cobbly loam
- 11 inches—highly fractured limestone

Depth class: Shallow

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 1.2 inches

Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches

Runoff: Very high

Hazard of erosion: By water—severe

Minor Components

- Soils in swales that have less than 35 percent rock fragments in the subsoil and have a dark-colored surface layer that is more than 16 inches thick (10 percent)
- Soils near smooth or concave slopes that have more than 35 percent rock fragments in the subsoil and have a dark-colored surface layer that is more than 20 inches thick (10 percent)
- Soils that have slopes of less than 20 percent or more than 55 percent (3 percent)
- Rock outcrop on shoulders (2 percent)

Use and Management

Major use: Rangeland

Major management factors: Depth to bedrock in some areas, rock fragments on the surface, available water capacity, water erosion, and slope

Dominant vegetation in natural potential plant community: Cedarhill—mountain big sagebrush and bluebunch wheatgrass; Hymas—low sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by the rock fragments on the surface, available water capacity, and slope.
- Production is limited mainly by the depth to bedrock and the restricted available water capacity.
- Use of equipment is limited by slope.

Interpretive Groups

Land capability classification: Cedarhill—6e, nonirrigated; Hymas—6s, nonirrigated

Ecological site: Cedarhill—Gravelly Loam, 16- to 22-inch precipitation zone;
Hymas—Shallow Stony, 12- to 16-inch precipitation zone

21—Cedarhill-Lostine complex, 12 to 30 percent slopes

Composition

Cedarhill and similar soils—40 percent

Lostine and similar soils—40 percent

Minor components—20 percent

Setting

Landform: Fan remnants

Elevation: 5,300 to 6,500 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 43 degrees F

Frost-free period—80 to 100 days

Characteristics of Cedarhill*Position on landscape:* Convex slopes*Typical profile:*

0 to 7 inches—grayish brown gravelly silt loam

7 to 12 inches—grayish brown gravelly loam

12 to 27 inches—light brownish gray very gravelly loam

27 to 60 inches—very pale brown extremely cobbly loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderate*Available water capacity:* 4.9 inches*Potential rooting depth:* 60 inches or more*Runoff:* Medium*Hazard of erosion:* By water—severe***Characteristics of Lostine****Position on landscape:* Concave or slightly convex slopes*Typical profile:*

0 to 7 inches—dark grayish brown silt loam

7 to 45 inches—brown silt loam

45 to 60 inches—pale brown silt loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderate*Available water capacity:* 11.1 inches*Potential rooting depth:* 60 inches or more*Runoff:* Medium*Hazard of erosion:* By water—severe***Minor Components***

- Ririe soils on smooth slopes (10 percent)
- Hondoho soils on convex slopes (5 percent)
- Soils that have slopes of less than 12 percent or more than 30 percent (5 percent)

Use and Management*Major uses:* Nonirrigated cropland, and rangeland

Major management factors: Growing season, depth to carbonates in some areas, rock fragments on the surface in some areas, available water capacity in some areas, water erosion, and slope

Nonirrigated cropland*Suitable crop:* Wheat*General management considerations:*

- The short growing season limits the choice of crops.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Rock fragments on the surface make seedbed preparation difficult.
- Minimize the risk of erosion and conserve moisture by chiseling stubble fields on

the contour or across the slope in fall and by maintaining crop residue on the soil surface.

Rangeland

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by the rock fragments on the surface in some areas and water erosion.
- Production is limited mainly by the restricted available water capacity in some areas.

Interpretive Groups

Land capability classification: 4e, nonirrigated

Ecological site: Cedarhill—Gravelly Loam, 16- to 22-inch precipitation zone;
Lostine—Loamy, 13- to 16-inch precipitation zone

22—Collinston silt loam, 0 to 2 percent slopes

Composition

Collinston and similar soils—85 percent

Minor components—15 percent

Setting

Landform: Lake terraces

Elevation: 4,500 to 5,500 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 47 degrees F

Frost-free period—100 to 110 days

Characteristics of Collinston

Typical profile:

0 to 12 inches—grayish brown silt loam

12 to 20 inches—brown silt loam

20 to 60 inches—very pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Negligible to low

Hazard of erosion: By water—none or slight

Minor Components

- Kearns soils on smooth slopes (5 percent)
- Lagonot soils in depressions near terrace risers (5 percent)
- Wheelon soils on terrace risers (5 percent)

Use and Management

Major use: Nonirrigated cropland

Major management factor: Depth to carbonates

Suitable crops: Wheat and barley

General management consideration:

- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.

Interpretive Groups

Land capability classification: 3c, nonirrigated

23—Collinston-Kearns complex, 2 to 12 percent slopes***Composition***

Collinston and similar soils—45 percent

Kearns and similar soils—30 percent

Minor components—25 percent

Setting

Landform: Lake terraces

Elevation: 4,400 to 5,500 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 48 degrees F

Frost-free period—100 to 120 days

Characteristics of Collinston

Position on landscape: Slightly convex or smooth slopes

Typical profile:

0 to 12 inches—grayish brown silt loam

12 to 20 inches—brown silt loam

20 to 60 inches—very pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Kearns

Position on landscape: Concave slopes

Typical profile:

0 to 8 inches—grayish brown silt loam

8 to 32 inches—light brownish gray and pale brown silt loam

32 to 67 inches—very pale brown and light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Wheelon soils on convex shoulders (10 percent)
- Soils on concave slopes that have a dark-colored surface layer that is more than

- 20 inches thick and have more than 18 percent clay in the subsoil (10 percent)
- Soils in depressions that have more than 35 percent rock fragments in the subsoil (5 percent)

Use and Management

Major use: Nonirrigated cropland

Major management factors: Depth to carbonates, water erosion, and slope

Suitable crops: Wheat and barley

General management considerations:

- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by chiseling stubble fields on the contour or across the slope in fall, constructing terraces, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Interpretive Groups

Land capability classification: Collinston—3e, nonirrigated; Kearns—4e, nonirrigated

24—Copenhagen-Lonigan-Manila association, 12 to 50 percent slopes

Composition

Copenhagen and similar soils—35 percent

Lonigan and similar soils—30 percent

Manila and similar soils—20 percent

Minor components—15 percent

Setting

Landform: Mountains and ridges

Elevation: 4,800 to 6,500 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 43 degrees F

Frost-free period—70 to 95 days

Characteristics of Copenhagen

Position on landscape: Convex slopes

Typical profile:

0 to 6 inches—gray very channery loam

6 to 14 inches—gray very channery loam

14 inches—consolidated tuff

Depth class: Shallow

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 1.4 inches

Restriction to rooting depth: Consolidated tuff at a depth of 10 to 20 inches

Runoff: High

Hazard of erosion: By water—severe

Characteristics of Lonigan

Position on landscape: Slightly concave slopes

Typical profile:

- 0 to 11 inches—grayish brown very fine sandy loam
- 11 to 16 inches—light brownish gray very gravelly loam
- 16 to 33 inches—very pale brown and white very gravelly loam
- 33 inches—weathered tuff

Depth class: Moderately deep

Drainage class: Well drained

Permeability: Moderately rapid

Available water capacity: 4.5 inches

Restriction to rooting depth: Weathered tuff at a depth of 20 to 40 inches

Runoff: Medium

Hazard of erosion: By water—severe

Characteristics of Manila

Position on landscape: Concave slopes

Typical profile:

- 0 to 5 inches—dark grayish brown silt loam
- 5 to 19 inches—grayish brown silty clay loam
- 19 to 45 inches—yellowish brown silty clay
- 45 to 60 inches—pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Slow

Available water capacity: 10.7 inches

Runoff: Very high

Hazard of erosion: By water—severe

Minor Components

- Buckboard soils that are on south- and west-facing slopes and have more than 35 percent rock fragments in the subsoil (5 percent)
- Pavohroo soils on north- and east-facing slopes (5 percent)
- Calpac soils and areas of Rock outcrop (5 percent)
- Soils that are on ridges in areas east of Dairy Creek and are similar to the Lonigan soil but have consolidated tuff at a depth of more than 40 inches

Use and Management

Major use: Rangeland

Major management factors: Depth to consolidated tuff in some areas, rock fragments on the surface in some areas, available water capacity in some areas, water erosion, and slope

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by the rock fragments on the surface in some areas and slope.
- Uniform distribution of grazing is difficult because of the slope or the lack of permanent water developments, or both.
- Production is limited mainly by the depth to consolidated tuff in some areas and the restricted available water capacity in some areas.
- Use of equipment is limited by slope.

Interpretive Groups

Land capability classification: Copenhagen—7e, nonirrigated; Lonigan and Manila—6e, nonirrigated

Ecological site: Copenhagen—Shallow Loamy, 13- to 16-inch precipitation zone;
 Lonigan—Ashy Loam, 13- to 16-inch precipitation zone; Manila—Loamy,
 16- to 22-inch precipitation zone

25—Darkbull-Pyrat-Ecur complex, 2 to 30 percent slopes

Composition

Darkbull and similar soils—40 percent

Pyrat and similar soils—30 percent

Ecur and similar soils—25 percent

Minor components—5 percent

Setting

Landform: Fan remnants and lake terraces

Elevation: 4,400 to 5,000 feet

Climatic data (mean annual):

Precipitation—about 11 inches

Air temperature—about 47 degrees F

Frost-free period—100 to 120 days

Characteristics of Darkbull

Position on landscape: Smooth or convex slopes

Typical profile:

0 to 10 inches—light brownish gray and pale brown gravelly loam

10 to 60 inches—pale brown very gravelly sandy loam and variegated
 extremely gravelly sandy loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate in the upper part and very rapid in the lower part

Available water capacity: 7 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Characteristics of Pyrat

Position on landscape: Slightly concave slopes

Typical profile:

0 to 14 inches—pale brown gravelly silt loam

14 to 25 inches—pale brown and very pale brown very gravelly sandy
 loam

25 to 33 inches—light gray extremely gravelly sandy loam

33 to 43 inches—very pale brown extremely gravelly sandy loam

43 to 65 inches—very pale brown extremely gravelly loamy sand

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate in the upper part and very rapid in the lower part

Available water capacity: 4.5 inches

Potential rooting depth: Somewhat restricted at a depth of 25 inches

Runoff: Medium

Hazard of erosion: By water—severe

Characteristics of Ecur

Position on landscape: Convex slopes

Typical profile:

0 to 15 inches—light brownish gray fine sandy loam

15 to 37 inches—light gray fine sandy loam

37 to 60 inches—light gray loamy fine sand and pale yellow gravelly loamy fine sand

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately rapid

Available water capacity: 6.7 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—severe; by wind—severe

Minor Components

- Raldrige soils in concave areas (3 percent)
- Bayhook soils on convex, low terraces (2 percent)

Use and Management

Major use: Rangeland

Major management factors: Rock fragments on the surface in some areas, available water capacity in some areas, wind erosion, and water erosion

Dominant vegetation in natural potential plant community: Darkbull and Ecur—basin big sagebrush and bluebunch wheatgrass; Pyrat—black sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by the rock fragments on the surface in some areas, wind erosion, and water erosion.
- Production is limited mainly by the low precipitation during the growing season and the restricted available water capacity in some areas.
- After seeding, defer grazing until young plants are well established.

Interpretive Groups

Land capability classification: 6e, nonirrigated

Ecological site: Darkbull and Ecur—Loamy, 11- to 13-inch precipitation zone;

Pyrat—Limestone Gravelly, 12- to 16-inch precipitation zone

26—DeJarnet gravelly silt loam, 0 to 4 percent slopes

Composition

DeJarnet and similar soils—90 percent

Minor components—10 percent

Setting

Landform: Lake terraces

Elevation: 4,900 to 5,100 feet

Climatic data (mean annual):

Precipitation—about 13 inches

Air temperature—about 48 degrees F

Frost-free period—120 to 130 days

Characteristics of DeJarnet

Typical profile:

- 0 to 3 inches—grayish brown gravelly silt loam
- 3 to 27 inches—grayish brown and brown gravelly silt loam
- 27 to 41 inches—pale brown very gravelly loam
- 41 to 62 inches—light gray extremely gravelly loamy fine sand

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 5.6 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—slight

Minor Components

- Neeley soils on convex slopes (2 percent)
- Kearns soils on concave slopes (3 percent)
- Soils that are in depressions and have less than 35 percent rock fragments in the subsoil (3 percent)
- Soils that have slopes of more than 4 percent (2 percent)

Use and Management

Major uses: Nonirrigated cropland, and rangeland

Major management factors: Rock fragments on the surface and available water capacity

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- Continuous cropping is not suitable because of the limited precipitation.
- Rock fragments on the surface make seedbed preparation difficult.
- Conserve moisture by chiseling stubble fields on the contour or across the slope in fall and by maintaining crop residue on the soil surface.

Rangeland

Dominant vegetation in natural potential plant community: Basin big sagebrush and bluebunch wheatgrass

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Production is limited mainly by the low precipitation during the growing season and the restricted available water capacity.

Interpretive Groups

Land capability classification: 3c, nonirrigated

Ecological site: Loamy, 11- to 13-inch precipitation zone

27—Dumps, mine

This unit is in the mountainous area north of Malad City. It consists of open pits from which pumice is excavated and trucked to Malad City for packaging and transport. The material is used in making filters, potting soil filler, paint coloring, and cleansers. The floor of the pits is dominantly consolidated pumice. This unit has very little potential for producing vegetation. The land capability classification is 8.

28—Ecur fine sandy loam, 0 to 4 percent slopes

Composition

Ecur and similar soils—85 percent

Minor components—15 percent

Setting

Landform: Lake terraces

Elevation: 4,400 to 5,000 feet

Climatic data (mean annual):

Precipitation—about 12 inches

Air temperature—about 47 degrees F

Frost-free season—100 to 110 days

Characteristics of Ecur

Typical profile:

0 to 15 inches—light brownish gray fine sandy loam

15 to 37 inches—light gray fine sandy loam

37 to 60 inches—light gray loamy fine sand and pale yellow gravelly loamy fine sand and loamy fine sand

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately rapid

Available water capacity: 6.7 inches

Potential rooting depth: 60 inches or more

Runoff: Very low

Hazard of erosion: By water—slight; by wind—severe

Minor Components

- Bayhook soils on convex slopes (3 percent)
- Darkbull soils on backslopes (5 percent)
- Pyrat soils on convex slopes (5 percent)
- Soils that have slopes of more than 4 percent (2 percent)

Use and Management

Major uses: Rangeland and irrigated cropland

Major management factors: Wind erosion

Rangeland

Dominant vegetation in natural potential plant community: Utah juniper, basin big sagebrush, and Indian ricegrass

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Seeding of adapted species to improve the range is limited by the low precipitation during the growing season and by wind erosion.
- Production is limited mainly by the low precipitation during the growing season.

Irrigated cropland

Suitable crop: Barley

General management considerations:

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.

- Minimize the risk of erosion and conserve moisture by planting crops in narrow strips at right angles to the prevailing wind, subsoiling, and maintaining crop residue on the soil surface.

Interpretive Groups

Land capability classification: 2e, irrigated, and 6c, nonirrigated

Ecological site: Sandy, 8- to 12-inch precipitation zone

29—Ecur-Darkbull complex, 1 to 8 percent slopes

Composition

Ecur and similar soils—45 percent

Darkbull and similar soils—30 percent

Minor components—25 percent

Setting

Landform: Fan remnants

Elevation: 4,400 to 5,000 feet

Climatic data (mean annual):

Precipitation—about 11 inches

Air temperature—about 47 degrees F

Frost-free period—100 to 120 days

Characteristics of Ecur

Position on landscape: Convex slopes

Typical profile:

0 to 15 inches—light brownish gray fine sandy loam

15 to 37 inches—light gray fine sandy loam

37 to 60 inches—light gray loamy fine sand and pale yellow gravelly loamy fine sand and loamy fine sand

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately rapid

Available water capacity: 6.7 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—moderate; by wind—severe

Characteristics of Darkbull

Position on landscape: Smooth or slightly convex slopes

Typical profile:

0 to 10 inches—light brownish gray and pale brown gravelly loam

10 to 60 inches—pale brown very gravelly sandy loam and variegated extremely gravelly sandy loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate in the upper part and very rapid in the lower part

Available water capacity: 7 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Lanoak soils on concave slopes and in depressions (10 percent)
- Bayhook soils on convex, lower lying terraces (10 percent)
- Soils that have slopes of more than 8 percent (5 percent)

Use and Management

Major use: Rangeland

Major management factors: Rock fragments on the surface in some areas, available water capacity in some areas, water erosion, and wind erosion in some areas

Dominant vegetation in natural potential plant community: Basin big sagebrush and bluebunch wheatgrass

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Seeding of adapted species to improve the range is limited by the low precipitation during the growing season, rock fragments on the surface in some areas, available water capacity in some areas, water erosion, and wind erosion in some areas.
- Production is limited mainly by the low precipitation during the growing season and the restricted available water capacity in some areas.

Interpretive Groups

Land capability classification: 6e, nonirrigated

Ecological site: Loamy, 11- to 13-inch precipitation zone

30—Elevator silt loam, 0 to 4 percent slopes

Composition

*Elevator and similar soils—*80 percent

*Minor components—*20 percent

Setting

Landform: Lake terraces

Elevation: 4,900 to 5,200 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 43 degrees F

Frost-free period—80 to 100 days

Characteristics of Elevator

Typical profile:

0 to 10 inches—brown silt loam

10 to 32 inches—brown and pale brown silty clay loam

32 to 60 inches—light gray silty clay loam

Depth class: Very deep

Drainage class: Moderately well drained

Permeability: Slow

Available water capacity: 10.8 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—slight

Depth to seasonal high water table: 60 to 72 inches in March through May

Minor Components

- Manila soils on convex slopes (10 percent)
- Bothwell soils on slightly higher lying terrace slopes (5 percent)
- Jensen soils in depressions and on concave slopes (5 percent)

Use and Management

Major uses: Nonirrigated cropland and hayland

Major management factors: Growing season and permeability

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Increase the water intake rate by regularly adding organic matter, chiseling stubble fields on the contour or across the slope in fall, and limiting the number of tillage operations.

Nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as managing nutrients and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: 3c, nonirrigated

31—Elevator-Jensen complex, 0 to 4 percent slopes

Composition

*Elevator and similar soils—*40 percent

*Jensen and similar soils—*35 percent

*Minor components—*25 percent

Setting

Landform: Lake terraces

Elevation: 4,900 to 5,200 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 43 degrees F

Frost-free period—80 to 100 days

Characteristics of Elevator

Position on landscape: Smooth slopes

Typical profile:

0 to 10 inches—brown silt loam

10 to 32 inches—brown and pale brown silty clay loam

32 to 60 inches—light gray silty clay loam

Depth class: Very deep

Drainage class: Moderately well drained

Permeability: Slow

Available water capacity: 10.8 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—slight

Depth to seasonal high water table: 60 to 72 inches in March through May

Characteristics of Jensen

Position on landscape: Smooth or slightly convex slopes

Typical profile:

0 to 12 inches—grayish brown silt loam

12 to 45 inches—brown and pale brown gravelly silt loam

45 to 60 inches—pale brown very gravelly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 9.2 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—slight

Minor Components

- Hondoho soils in depressions (10 percent)
- Bothwell soils on low lake terraces (10 percent)
- Soils that have slopes of more than 4 percent (5 percent)

Use and Management

Major use: Nonirrigated cropland

Major management factors: Growing season and permeability in some areas

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Increase the water intake rate by regularly adding organic matter, chiseling stubble fields on the contour or across the slope in fall, and limiting the number of tillage operations.

Interpretive Groups

Land capability classification: 3c, nonirrigated

32—Elevator-Jensen complex, 4 to 12 percent slopes

Composition

*Elevator and similar soils—*40 percent

*Jensen and similar soils—*35 percent

*Minor components—*25 percent

Setting

Landform: Lake terraces (fig. 1)

Elevation: 4,900 to 5,900 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 43 degrees F

Frost-free period—80 to 100 days

Characteristics of Elevator

Position on landscape: Smooth slopes



Figure 1.—Typical area of Elevator-Jensen complex, 4 to 12 percent slopes. Elevator silt loam is in foreground, and Jensen silt loam is in draws. Pocatello Valley is in background.

Typical profile:

- 0 to 10 inches—brown silt loam
- 10 to 32 inches—brown and pale brown silty clay loam
- 32 to 60 inches—light gray silty clay loam

Depth class: Very deep

Drainage class: Moderately well drained

Permeability: Slow

Available water capacity: 10.8 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—moderate

Depth to seasonal high water table: 60 to 72 inches in March through May

Characteristics of Jensen

Position on landscape: Smooth or slightly convex slopes

Typical profile:

- 0 to 12 inches—grayish brown silt loam
- 12 to 45 inches—brown and pale brown gravelly silt loam
- 45 to 60 inches—pale brown very gravelly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 9.2 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Hondoho soils in depressions (10 percent)
- Bothwell soils on low lake terraces (5 percent)
- Manila soils on smooth or concave slopes (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (5 percent)

Use and Management

Major uses: Nonirrigated cropland, and rangeland

Major management factors: Growing season, permeability in some areas, and water erosion

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Increase the water intake rate and reduce the risk of erosion by regularly adding organic matter, chiseling stubble fields on the contour or across the slope in fall, limiting the number of tillage operations, and constructing terraces.

Rangeland

Dominant vegetation in natural potential plant community: Basin big sagebrush and bluebunch wheatgrass

General management consideration:

- The limitations for use as rangeland are minimal if proper grazing management is used.

Interpretive Groups

Land capability classification: 3e, nonirrigated

Ecological site: Loamy, 12- to 16-inch precipitation zone

33—Fridlo silt loam, 0 to 2 percent slopes

Composition

*Fridlo and similar soils—*75 percent

*Minor components—*25 percent

Setting

Landform: Lake terraces

Elevation: 4,300 to 4,500 feet

Climatic data (mean annual):

Precipitation—about 12 inches

Air temperature—about 48 degrees F

Frost-free season—120 to 130 days

Characteristics of Fridlo

Typical profile:

0 to 7 inches—dark grayish brown and grayish brown silt loam

7 to 24 inches—grayish brown and pale brown silty clay loam

24 to 39 inches—very pale brown and light gray silty clay loam

39 to 60 inches—white silt loam

Depth class: Very deep

Drainage class: Moderately well drained

Permeability: Slow

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Negligible

Depth to seasonal high water table: 39 to 72 inches in April through June

Hazard of erosion: By water—none or slight

Minor Components

- Goosenawt soils on slightly lower lying, concave slopes (5 percent)
- Kearns soils on slightly lower lying terraces (10 percent)
- Parleys soils on smooth terraces (10 percent)

Use and Management

Major uses: Irrigated cropland and hayland

Major management factors: Permeability, depth to carbonates, salinity, and sodicity

Irrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Conserve moisture and increase the water intake rate by regularly adding organic matter and limiting the number of tillage operations.
- An unfavorable calcium-to-magnesium ratio limits the growth of many plants.

Irrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: 4s, irrigated, and 6s, nonirrigated

34—Goosenawt gravelly loam, 0 to 2 percent slopes

Composition

*Goosenawt and similar soils—*75 percent

*Minor components—*25 percent

Setting

Landform: Flood plains

Elevation: 4,400 to 5,000 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 47 degrees F

Frost-free season—110 to 130 days

Characteristics of Goosenawt

Typical profile:

0 to 24 inches—gray and dark gray gravelly loam

24 to 58 inches—dark gray and very dark gray clay loam

58 to 74 inches—light brownish gray silt loam and pale brown loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 12.5 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—none or slight

Frequency of flooding: Rare

Minor Components

- Kearns soils on smooth terraces (5 percent)
- Parleys soils on slightly convex to smooth slopes (5 percent)
- Soils that are in depressions and have a seasonal high water table at the surface to a depth of 18 inches below the surface in spring (5 percent)
- Tirod soils on smooth to concave slopes (10 percent)

Use and Management

Major uses: Irrigated and nonirrigated cropland and hayland

Major management factors: Few limitations

Irrigated and nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.

Irrigated and nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: 2c, irrigated, and 3c, nonirrigated

35—Hans silt loam, 0 to 2 percent slopes

Composition

*Hans and similar soils—*80 percent

*Minor components—*20 percent

Setting

Landform: Lake terraces

Elevation: 4,400 to 4,900 feet

Climatic data (mean annual):

Precipitation—about 14 inches

Air temperature—about 47 degrees F

Frost-free season—120 to 130 days

Characteristics of Hans

Typical profile:

0 to 10 inches—light brownish gray silt loam

10 to 26 inches—light brownish gray silty clay loam

26 to 60 inches—light brownish gray and light gray silty clay loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Slow

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Negligible

Hazard of erosion: By water—none or slight

Minor Components

- Fridlo soils on concave low lake terraces (10 percent)
- Kearns soils on low terraces (5 percent)
- Parleys soils on smooth terraces (5 percent)

Use and Management

Major uses: Irrigated and nonirrigated cropland and hayland

Major management factors: Permeability and depth to carbonates

Irrigated and nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- This unit is well suited to crops, except the areas east of Samaria that have a high content of salt and a seasonal high water table.
- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- Increase the water intake rate by maintaining crop residue on the soil surface and limiting the number of tillage operations.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.

Irrigated and nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: 2e, irrigated, and 3c, nonirrigated

36—Highcreek-Sterling complex, 4 to 12 percent slopes

Composition

*Highcreek and similar soils—*45 percent

*Sterling and similar soils—*30 percent

*Minor components—*25 percent

Setting

Landform: Lake terraces and fan remnants

Elevation: 4,500 to 5,500 feet

Climatic data (mean annual):

Precipitation—about 13 inches

Air temperature—about 47 degrees F

Frost-free period—100 to 120 days

Characteristics of Highcreek

Position on landscape: Smooth or slightly convex slopes

Typical profile:

0 to 7 inches—grayish brown silt loam

7 to 26 inches—brown and light brownish gray silt loam

26 to 66 inches—very pale brown and pale brown gravelly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 9.9 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Sterling

Position on landscape: Concave slopes

Typical profile:

0 to 13 inches—brown very gravelly loam

13 to 66 inches—pale brown and very pale brown very gravelly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 4.9 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Samaria soils on convex slopes (10 percent)
- Lizdale soils on eroded, steep slopes (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (5 percent)
- Tirod soils on smooth slopes (5 percent)

Use and Management

Major uses: Nonirrigated cropland, and rangeland

Major management factors: Depth to carbonates, rock fragments on the surface in some areas, and water erosion

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- Continuous cropping is not suitable because of the limited precipitation.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Rock fragments on or near the surface of the soil limit tillage and make seedbed preparation difficult.
- Minimize the risk of erosion and conserve moisture by maintaining crop residue on the soil surface, constructing terraces, and limiting the number of tillage operations.

Rangeland

Dominant vegetation in natural potential plant community: Basin big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by the low precipitation during the growing season, rock fragments on the surface in some areas, and water erosion.
- Production is limited mainly by the low precipitation during the growing season.

Interpretive Groups

Land capability classification: Highcreek—4e, nonirrigated; Sterling—3e, nonirrigated

Ecological site: Highcreek—Loamy, 11- to 13-inch precipitation zone; Sterling—

Loamy, 12- to 16-inch precipitation zone

37—Highcreek-Sterling complex, 12 to 25 percent slopes

Composition

Highcreek and similar soils—40 percent

Sterling and similar soils—35 percent

Minor components—25 percent

Setting

Landform: Lake terraces and fan remnants

Elevation: 4,500 to 5,500 feet

Climatic data (mean annual):

Precipitation—about 13 inches

Air temperature—about 48 degrees F

Frost-free period—100 to 120 days

Characteristics of Highcreek

Position on landscape: Smooth or slightly convex slopes

Typical profile:

0 to 7 inches—grayish brown silt loam

7 to 26 inches—brown and light brownish gray silt loam

26 to 66 inches—very pale brown and pale brown gravelly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 9.9 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Characteristics of Sterling

Position on landscape: Concave slopes

Typical profile:

0 to 13 inches—brown very gravelly loam

13 to 66 inches—pale brown and very pale brown very gravelly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 4.9 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Minor Components

- Samaria soils on convex slopes (10 percent)
- Lizdale soils on eroded, steep slopes (5 percent)
- Soils that have slopes of less than 12 percent or more than 25 percent (5 percent)
- Bingham soils on smooth slopes (3 percent)
- Tirod soils on smooth slopes (2 percent)

Use and Management

Major uses: Nonirrigated cropland, and rangeland

Major management factors: Depth to carbonates, rock fragments on the surface in some areas, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- Continuous cropping is not suitable because of the limited precipitation.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Rock fragments on the surface make seedbed preparation difficult.
- Minimize the risk of erosion and conserve moisture by maintaining crop residue on the soil surface, farming across the slope, and limiting the number of tillage operations.

Rangeland

Dominant vegetation in natural potential plant community: Basin big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by the low precipitation during the growing season, rock fragments on the surface in some areas, and water erosion.
- Production is limited mainly by the low precipitation during the growing season.

Interpretive Groups

Land capability classification: Highcreek—6e, nonirrigated; Sterling—3e, nonirrigated

Ecological site: Highcreek—Loamy, 11- to 13-inch precipitation zone; Sterling—Loamy, 12- to 16-inch precipitation zone

38—Hillfield-Kucera complex, 4 to 30 percent slopes

Composition

*Hillfield and similar soils—*50 percent

*Kucera and similar soils—*30 percent

*Minor components—*20 percent

Setting

Landform: Dissected lake terraces

Elevation: 4,400 to 5,300 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 46 degrees F

Frost-free period—90 to 120 days

Characteristics of Hillfield

Position on landscape: Convex slopes

Typical profile:

0 to 7 inches—light gray silt loam

7 to 16 inches—light gray silt loam

16 to 60 inches—pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 11.1 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—severe

Characteristics of Kucera

Position on landscape: Concave slopes

Typical profile:

0 to 22 inches—dark grayish brown and brown silt loam

22 to 42 inches—pale brown silt loam

42 to 60 inches—very pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Minor Components

- Samaria soils on convex slopes (10 percent)
- Hans soils on concave slopes (5 percent)
- Raldrige soils on concave slopes (3 percent)
- Small areas of soils that have slopes of less than 4 percent or more than 30 percent (2 percent)

Use and Management

Major uses: Nonirrigated cropland, and rangeland

Major management factors: Depth to carbonates, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, and maintaining crop residue on the soil surface.

Rangeland

Dominant vegetation in natural potential plant community: Basin big sagebrush and bluebunch wheatgrass

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.

- Seeding of adapted species to improve the range is limited by water erosion.

Interpretive Groups

Land capability classification: Hillfield—6e, nonirrigated; Kucera—4e, nonirrigated

Ecological site: Loamy, 11- to 13-inch precipitation zone

39—Hillfield-Kucera complex, 30 to 50 percent slopes

Composition

Hillfield and similar soils—65 percent

Kucera and similar soils—20 percent

Minor components—15 percent

Setting

Landform: Dissected lake terraces

Elevation: 4,400 to 5,300 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 46 degrees F

Frost-free period—90 to 120 days

Characteristics of Hillfield

Position on landscape: Convex slopes

Typical profile:

0 to 7 inches—light gray silt loam

7 to 16 inches—light gray silt loam

16 to 60 inches—pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 11.1 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—severe

Characteristics of Kucera

Position on landscape: Concave slopes

Typical profile:

0 to 22 inches—dark grayish brown and brown silt loam

22 to 42 inches—pale brown silt loam

42 to 60 inches—very pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—severe

Minor Components

- Samaria soils on convex slopes (5 percent)
- Raldrige soils on concave slopes (5 percent)
- Hans soils on concave slopes (3 percent)

- Soils that have slopes of less than 30 percent (2 percent)

Use and Management

Major use: Rangeland

Major management factors: Water erosion and slope

Dominant vegetation in natural potential plant community: Basin big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by water erosion and slope.
- Use of equipment is limited by slope.

Interpretive Groups

Land capability classification: 7e, nonirrigated

Ecological site: Loamy, 11- to 13-inch precipitation zone

40—Hondoho-Calpac-Lizdale association, 30 to 70 percent slopes

Composition

*Hondoho and similar soils—*35 percent

*Calpac and similar soils—*20 percent

*Lizdale and similar soils—*20 percent

*Minor components—*25 percent

Setting

Landform: Mountains

Elevation: 4,800 to 7,200 feet

Climatic data (mean annual):

Precipitation—about 18 inches

Air temperature—about 44 degrees F

Frost-free period—70 to 100 days

Characteristics of Hondoho

Position on landscape: North- and east-facing, convex slopes

Typical profile:

0 to 14 inches—grayish brown gravelly silt loam

14 to 28 inches—pale brown very cobbly loam

28 to 60 inches—very pale brown very cobbly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 5.8 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Calpac

Position on landscape: East-facing, concave slopes

Typical profile:

0 to 8 inches—dark brown gravelly silt loam

8 to 15 inches—dark brown very gravelly silt loam

15 to 23 inches—brown extremely cobbly silt loam

23 to 60 inches—brown extremely cobbly silt loam

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: 4.9 inches
Potential rooting depth: 60 inches or more
Runoff: Very high
Hazard of erosion: By water—severe

Characteristics of Lizdale

Position on landscape: South-facing slopes
Typical profile:
 0 to 7 inches—dark grayish brown very gravelly silt loam
 7 to 36 inches—brown very gravelly loam and pink very gravelly sandy loam
 36 to 60 inches—light brown extremely gravelly sandy loam and extremely
 gravelly loamy sand
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately rapid
Available water capacity: 4.9 inches
Potential rooting depth: 60 inches or more
Runoff: High
Hazard of erosion: By water—severe

Minor Components

- Hymas soils on ridges (5 percent)
- Povey soils on concave slopes (5 percent)
- Ridgecrest soils on convex toeslopes (5 percent)
- Rock outcrop on shoulders (5 percent)
- Soils that have slopes of less than 30 percent (5 percent)

Use and Management

Major use: Rangeland
Major management factors: Rock fragments on the surface, available water capacity, water erosion, and slope
Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass
General management considerations:

- Seeding of adapted species to improve the range is limited by the rock fragments on the surface, water erosion, and slope.
- Uniform distribution of grazing is difficult because of the slope or the lack of permanent water developments, or both.
- Production is limited mainly by the restricted available water capacity.
- Use of equipment is limited by slope.

Interpretive Groups

Land capability classification: 7e, nonirrigated
Ecological site: Steep Slope, 16- to 22-inch precipitation zone

41—Hondoho-Hymas-Pavohroo association, 12 to 30 percent slopes

Composition

Hondoho and similar soils—35 percent
Hymas and similar soils—25 percent

Pavohroo and similar soils—20 percent

Minor components—20 percent

Setting

Landform: Mountains and ridges

Elevation: 5,000 to 7,700 feet

Climatic data (mean annual):

Precipitation—about 18 inches

Air temperature—about 43 degrees F

Frost-free period—40 to 100 days

Characteristics of Hondoho

Position on landscape: Convex slopes

Typical profile:

0 to 14 inches—grayish brown gravelly silt loam

14 to 28 inches—pale brown very cobbly loam

28 to 60 inches—very pale brown very cobbly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 5.8 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—severe

Characteristics of Hymas

Position on landscape: Smooth or convex slopes

Typical profile:

0 to 2 inches—grayish brown very cobbly loam

2 to 7 inches—brown very cobbly silt loam

7 to 11 inches—pale brown extremely cobbly loam

11 inches—highly fractured limestone

Depth class: Shallow

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 1.2 inches

Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches

Runoff: High

Hazard of erosion: By water—severe

Characteristics of Pavohroo

Position on landscape: Northeast-facing, concave slopes

Typical profile:

0 to 1 inch—slightly decomposed plant material

1 to 7 inches—dark brown gravelly silt loam

7 to 16 inches—brown silt loam

16 to 39 inches—brown and light yellowish brown gravelly silt loam

39 to 61 inches—light yellowish brown gravelly clay loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 10.3 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—severe

Minor Components

- Calpac soils on concave slopes (5 percent)
- Ridgecrest soils on convex slopes (5 percent)
- Soils that have slopes of less than 12 percent or more than 30 percent (5 percent)
- Rock outcrop on shoulders (3 percent)
- Povey soils on convex slopes (2 percent)

Use and Management

Major uses: Rangeland and nonirrigated cropland

Major management factors: Growing season, depth to bedrock in some areas, rock fragments on the surface, available water capacity in some areas, water erosion, and slope

Rangeland

Dominant vegetation in natural potential plant community: Hondoho—mountain big sagebrush and bluebunch wheatgrass; Hymas—low sagebrush and bluebunch wheatgrass; Pavohroo—quaking aspen

General management considerations:

- Seeding of adapted species to improve the range is limited by the depth to bedrock in some areas and rock fragments on the surface.
- Production is limited mainly by the restricted available water capacity in some areas.

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Rock fragments on the surface make seedbed preparation difficult.
- Minimize the risk of erosion and conserve moisture by maintaining crop residue on the soil surface, farming across the slope, and limiting the number of tillage operations.

Interpretive Groups

Land capability classification: Hondoho and Pavohroo—4e, nonirrigated; Hymas—6s, nonirrigated

Ecological site: Hondoho—Steep Slope, 16- to 22-inch precipitation zone; Hymas—Shallow Stony, 12- to 16-inch precipitation zone; Pavohroo—Moist Mountain Loam, 20+-inch precipitation zone

42—Hondoho-Hymas-Pavohroo association, 30 to 60 percent slopes

Composition

Hondoho and similar soils—35 percent

Hymas and similar soils—25 percent

Pavohroo and similar soils—20 percent

Minor components—20 percent

Setting

Landform: Mountains and ridges

Elevation: 5,000 to 7,700 feet

Climatic data (mean annual):

Precipitation—about 18 inches

Air temperature—about 43 degrees F

Frost-free period—40 to 100 days

Characteristics of Hondoho

Position on landscape: Convex slopes

Typical profile:

0 to 14 inches—grayish brown gravelly silt loam

14 to 28 inches—pale brown very cobbly loam

28 to 60 inches—very pale brown very cobbly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 5.8 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Hymas

Position on landscape: Smooth or convex slopes

Typical profile:

0 to 2 inches—grayish brown very cobbly loam

2 to 7 inches—brown very cobbly silt loam

7 to 11 inches—pale brown extremely cobbly loam

11 inches—highly fractured limestone

Depth class: Shallow

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 1.2 inches

Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Pavohroo

Position on landscape: Northeast-facing, concave slopes

Typical profile:

0 to 1 inch—slightly decomposed plant material

1 to 7 inches—dark brown gravelly silt loam

7 to 16 inches—brown silt loam

16 to 39 inches—brown and light yellowish brown gravelly silt loam

39 to 61 inches—light yellowish brown gravelly clay loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 10.3 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Minor Components

- Calpac soils on concave slopes (5 percent)
- Ridgecrest soils on convex slopes (5 percent)
- Soils that have slopes of less than 30 percent (5 percent)
- Rock outcrop on shoulders (3 percent)
- Povey soils on convex slopes (2 percent)

Use and Management

Major use: Rangeland

Major management factors: Depth to bedrock in some areas, rock fragments on the surface, available water capacity in some areas, water erosion, and slope

Dominant vegetation in natural potential plant community: Hondoho—mountain big sagebrush and bluebunch wheatgrass; Hymas—low sagebrush and bluebunch wheatgrass; Pavohroo—quaking aspen

General management considerations:

- Seeding of adapted species to improve the range is limited by the depth to bedrock in some areas, rock fragments on the surface, water erosion, and slope.
- Uniform distribution of grazing is difficult because of the slope or the lack of permanent water developments, or both.
- Production is limited mainly by the depth to bedrock in some areas and the restricted available water capacity in some areas.
- Use of equipment is limited by slope.

Interpretive Groups

Land capability classification: Hondoho and Pavohroo—7e, nonirrigated; Hymas—7s, nonirrigated

Ecological site: Hondoho—Steep Slope, 16- to 22-inch precipitation zone; Hymas—Shallow Stony, 12- to 16-inch precipitation zone; Pavohroo—Moist Mountain Loam, 20+-inch precipitation zone

43—Hondoho-Ridgecrest-Hades association, 12 to 50 percent slopes

Composition

Hondoho and similar soils—35 percent

Ridgecrest and similar soils—30 percent

Hades and similar soils—20 percent

Minor components—15 percent

Setting

Landform: Mountains

Elevation: 4,900 to 7,000 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 44 degrees F

Frost-free period—70 to 100 days

Characteristics of Hondoho

Position on landscape: North- and east-facing slopes

Typical profile:

0 to 14 inches—grayish brown gravelly silt loam

14 to 28 inches—pale brown very cobbly loam

28 to 60 inches—very pale brown very cobbly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 5.8 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—moderate or severe

Characteristics of Ridgecrest

Position on landscape: South- and west-facing slopes

Typical profile:

0 to 9 inches—grayish brown very gravelly silt loam

9 to 13 inches—grayish brown very cobbly silt loam

13 to 31 inches—grayish brown, yellowish brown, and light yellowish brown very cobbly loam

31 to 35 inches—very pale brown extremely cobbly sandy loam

35 inches—highly fractured limestone

Depth class: Moderately deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 3.6 inches

Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches

Runoff: High

Hazard of erosion: By water—moderate or severe

Characteristics of Hades

Position on landscape: Smooth or concave slopes

Typical profile:

0 to 20 inches—dark grayish brown and grayish brown silt loam

20 to 42 inches—brown silty clay loam

42 to 60 inches—yellowish brown gravelly silty clay loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 10.8 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—moderate or severe

Minor Components

- Hymas soils on convex ridges (5 percent)
- Rock outcrop on shoulders (5 percent)
- Soils that have slopes of less than 12 percent (3 percent)
- Calpac soils on concave slopes (2 percent)

Use and Management

Major use: Rangeland

Major management factors: Rock fragments on the surface in some areas, available water capacity in some areas, water erosion, and slope

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by the rock fragments on the surface in some areas, water erosion, and slope.
- Uniform distribution of grazing is difficult because of the slope or the lack of permanent water developments, or both.
- Production is limited mainly by the restricted available water capacity in some areas.
- Use of equipment is limited by slope.

Interpretive Groups

Land capability classification: 6e, nonirrigated

Ecological site: Hondoho—Steep Slope, 16- to 22-inch precipitation zone; Ridgecrest and Hades—Loamy, 16- to 22-inch precipitation zone

44—Hutchley-McCarey-Araveton complex, 4 to 40 percent slopes***Composition***

Hutchley and similar soils—30 percent

McCarey and similar soils—25 percent

Araveton and similar soils—25 percent

Minor components—20 percent

Setting

Landform: Lava plains

Elevation: 4,900 to 6,200 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free period—70 to 100 days

Characteristics of Hutchley

Position on landscape: Convex slopes

Typical profile:

0 to 6 inches—dark grayish brown gravelly loam

6 to 13 inches—brown very cobbly clay loam

13 inches—hard, fractured basalt

Depth class: Shallow

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 1.6 inches

Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches

Runoff: High

Hazard of erosion: By water—severe

Characteristics of McCarey

Position on landscape: Concave or slightly convex slopes on plains

Typical profile:

0 to 8 inches—dark grayish brown silt loam

8 to 15 inches—grayish brown silt loam

15 to 19 inches—pale brown silt loam

19 to 23 inches—very pale brown cobbly silt loam

23 inches—hard, slightly weathered basalt

Depth class: Moderately deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 4.4 inches

Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches

Runoff: High

Hazard of erosion: By water—severe

Characteristics of Araveton

Position on landscape: Concave slopes on plains

Typical profile:

0 to 8 inches—grayish brown silt loam

8 to 36 inches—brown silt loam

36 to 62 inches—pale brown and very pale brown gravelly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 10.5 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—severe

Minor Components

- Hades soils on steep slopes and ridges (5 percent)
- Hondoho soils on steep slopes (5 percent)
- Rexburg soils on smooth or concave slopes (5 percent)
- Rock outcrop on shoulders (5 percent)

Use and Management

Major use: Rangeland

Major management factors: Depth to bedrock in some areas, rock fragments on the surface in some areas, available water capacity in some areas, water erosion, and slope

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by the depth to bedrock in some areas, rock fragments on the surface in some areas, water erosion, and slope.
- Uniform distribution of grazing is difficult because of the slope or the lack of permanent water developments, or both.
- Production is limited mainly by the depth to bedrock in some areas and the restricted available water capacity in some areas.
- Use of equipment is limited by slope.

Interpretive Groups

Land capability classification: Hutchley—6e, nonirrigated; McCarey and Araveton—4e, nonirrigated

Ecological site: Hutchley—Shallow Loamy, 13- to 16-inch precipitation zone; McCarey and Araveton—Loamy, 13- to 16-inch precipitation zone

45—Hymas-Calpac-Ireland association, 30 to 70 percent slopes

Composition

Hymas and similar soils—35 percent
Calpac and similar soils—25 percent
Ireland and similar soils—20 percent
Minor components—20 percent

Setting

Landform: Ridges and mountains
Elevation: 5,000 to 7,500 feet
Climatic data (mean annual):
 Precipitation—about 16 inches
 Air temperature—about 43 degrees F
 Frost-free period—70 to 90 days

Characteristics of Hymas

Position on landscape: Smooth or convex slopes
Typical profile:
 0 to 2 inches—grayish brown very cobbly loam
 2 to 7 inches—brown very cobbly silt loam
 7 to 11 inches—pale brown extremely cobbly loam
 11 inches—highly fractured limestone
Depth class: Shallow
Drainage class: Well drained
Permeability: Moderate
Available water capacity: 1.2 inches
Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches
Runoff: Very high
Hazard of erosion: By water—severe

Characteristics of Calpac

Position on landscape: Concave slopes
Typical profile:
 0 to 8 inches—dark brown gravelly silt loam
 8 to 15 inches—dark brown very gravelly silt loam
 15 to 23 inches—brown extremely cobbly silt loam
 23 to 60 inches—brown extremely cobbly silt loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: 4.9 inches
Potential rooting depth: 60 inches or more
Runoff: Very high
Hazard of erosion: By water—severe

Characteristics of Ireland

Typical profile:
 0 to 8 inches—grayish brown very gravelly silt loam
 8 to 28 inches—grayish brown and brown extremely cobbly silt loam
 28 inches—highly fractured limestone

Depth class: Moderately deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 2 inches

Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches

Runoff: Very high

Hazard of erosion: By water—severe

Minor Components

- Pavohroo soils in depressions (5 percent)
- Povey soils on concave slopes (5 percent)
- Ridgecrest soils on convex slopes (5 percent)
- Rock outcrop on shoulders (5 percent)

Use and Management

Major use: Rangeland (fig. 2)

Major management factors: Depth to bedrock in some areas, rock fragments on the surface, available water capacity, water erosion, and slope

Dominant vegetation in natural potential plant community: Hymas—low sagebrush and bluebunch wheatgrass; Calpac and Ireland—mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by the depth to bedrock in some areas, rock fragments on the surface, water erosion, and slope.
- Uniform distribution of grazing is difficult because of the slope or lack of permanent water developments, or both.
- Production is limited mainly by the depth to bedrock in some areas and the restricted available water capacity.
- Use of equipment is limited by the rock fragments on the surface and slope.

Interpretive Groups

Land capability classification: Hymas—7s, nonirrigated; Calpac and Ireland—7e, nonirrigated



Figure 2.—Typical area of Hymas very cobbly loam in an area of Hymas-Calpac-Ireland association, 30 to 70 percent slopes, in foreground. Blue Spring Hills are in background.

Ecological site: Hymas—Shallow Stony, 12- to 16-inch precipitation zone; Calpac and Ireland—Steep Slope, 16- to 22-inch precipitation zone

46—Hymas-Northwater-Clayburn association, 20 to 60 percent slopes

Composition

Hymas and similar soils—30 percent

Northwater and similar soils—30 percent

Clayburn and similar soils—20 percent

Minor components—20 percent

Setting

Landform: Ridges and mountains

Elevation: 5,000 to 7,700 feet

Climatic data (mean annual):

Precipitation—about 20 inches

Air temperature—about 43 degrees F

Frost-free period—40 to 90 days

Characteristics of Hymas

Position on landscape: South-facing slopes

Typical profile:

0 to 2 inches—grayish brown very cobbly loam

2 to 7 inches—brown very cobbly silt loam

7 to 11 inches—pale brown extremely cobbly loam

11 inches—highly fractured limestone

Depth class: Shallow

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 1.2 inches

Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Northwater

Position on landscape: Concave, north-facing slopes

Typical profile:

0 to 2 inches—slightly decomposed plant material

2 to 20 inches—dark grayish brown and grayish brown gravelly silt loam

20 to 31 inches—dark grayish brown very gravelly silt loam

31 to 37 inches—light yellowish brown very gravelly loam

37 to 62 inches—light yellowish brown very gravelly clay loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 8.5 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Clayburn

Position on landscape: Slightly concave slopes

Typical profile:

- 0 to 4 inches—dark grayish brown silt loam
- 4 to 21 inches—dark grayish brown and grayish brown loam
- 21 to 39 inches—light yellowish brown cobbly clay loam
- 39 to 60 inches—yellowish brown cobbly clay loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderate*Available water capacity:* 9.7 inches*Potential rooting depth:* 60 inches or more*Runoff:* Very high*Hazard of erosion:* By water—severe**Minor Components**

- Pavohroo soils on concave, north-facing slopes (10 percent)
- Povey soils on concave, north- and east-facing slopes (5 percent)
- Ireland soils on ridges (3 percent)
- Rock outcrop on shoulders (2 percent)

Use and Management*Major use:* Rangeland (fig. 3)*Major management factors:* Depth to bedrock in some areas, rock fragments on the surface in some areas, available water capacity in some areas, water erosion, and slope*Dominant vegetation in natural potential plant community:* Hymas—low sagebrush and bluebunch wheatgrass; Northwater—Douglas fir, mountain snowberry, and pine reedgrass; Clayburn—mountain big sagebrush and bluebunch wheatgrass*General management considerations:*

- Seeding of adapted species to improve the range is limited by the rock fragments on the surface in some areas, water erosion, and slope.
- Uniform distribution of grazing is difficult because of the slope or the lack of permanent water developments, or both.
- Production is limited mainly by the depth to bedrock in some areas and available water capacity in some areas.
- Use of equipment is limited by slope.

Interpretive Groups*Land capability classification:* Hymas—7s, nonirrigated; Northwater and Clayburn—7e, nonirrigated*Ecological site:* Hymas—Shallow Stony, 12- to 16-inch precipitation zone; Northwater—Mountain Loamy, 22+-inch precipitation zone; Clayburn—Loamy, 16- to 22-inch precipitation zone**47—Hymas-Povey association, 30 to 60 percent slopes****Composition***Hymas and similar soils*—45 percent*Povey and similar soils*—30 percent*Minor components*—25 percent**Setting***Landform:* Ridges and mountains*Elevation:* 5,000 to 7,700 feet



Figure 3.—Typical area of Hymas-Northwater-Clayburn association, 20 to 60 percent slopes. Clayburn silt loam is in areas of aspen, and Northwater gravelly silt loam is in areas of Douglas fir. Malad Valley is in background.

Climatic data (mean annual):

Precipitation—about 18 inches

Air temperature—about 42 degrees F

Frost-free period—60 to 90 days

Characteristics of Hymas

Position on landscape: Smooth or convex slopes

Typical profile:

0 to 2 inches—grayish brown very cobbly loam

2 to 7 inches—brown very cobbly silt loam

7 to 11 inches—pale brown extremely cobbly loam

11 inches—highly fractured limestone

Depth class: Shallow

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 1.2 inches

Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Povey

Position on landscape: North- and east-facing slopes

Typical profile:

0 to 5 inches—dark grayish brown gravelly loam

5 to 20 inches—grayish brown and brown very cobbly loam

20 to 35 inches—yellowish brown very gravelly sandy loam

35 to 60 inches—brown extremely gravelly sandy loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 6.4 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Minor Components

- Pavohroo soils on concave slopes (10 percent)
- Calpac soils on northeast-facing slopes (5 percent)
- Ireland soils on east-facing slopes (5 percent)
- Rock outcrop on shoulders (5 percent)

Use and Management

Major use: Rangeland

Major management factors: Depth to bedrock in some areas, rock fragments on the surface, available water capacity, water erosion, and slope

Dominant vegetation in natural potential plant community: Hymas—low sagebrush and bluebunch wheatgrass; Povey—mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by the depth to bedrock in some areas, rock fragments on the surface, water erosion, and slope.
- Uniform distribution of grazing is difficult because of the slope or lack of permanent water developments, or both.
- Production is limited mainly by the depth to bedrock in some areas and the restricted available water capacity.
- Use of equipment is limited mainly by the rock fragments on the surface and slope.

Interpretive Groups

Land capability classification: Hymas—7s, nonirrigated; Povey—7e, nonirrigated

Ecological site: Hymas—Shallow Stony, 12- to 16-inch precipitation zone; Povey—Steep Slope, 16- to 22-inch precipitation zone

48—Hymas-Povey-Pavohroo association, 30 to 70 percent slopes

Composition

Hymas and similar soils—35 percent

Povey and similar soils—25 percent

Pavohroo and similar soils—20 percent

Minor components—20 percent

Setting

Landform: Ridges and mountains

Elevation: 5,000 to 7,700 feet

Climatic data (mean annual):

Precipitation—about 18 inches

Air temperature—about 42 degrees F

Frost-free period—40 to 90 days

Characteristics of Hymas

Position on landscape: Smooth or convex slopes

Typical profile:

0 to 2 inches—grayish brown very cobbly loam

2 to 7 inches—brown very cobbly silt loam

7 to 11 inches—pale brown extremely cobbly loam

11 inches—highly fractured limestone

Depth class: Shallow

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 1.2 inches

Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Povey

Position on landscape: East-facing slopes

Typical profile:

0 to 5 inches—dark grayish brown gravelly loam

5 to 20 inches—grayish brown and brown very cobbly loam

20 to 35 inches—yellowish brown very gravelly sandy loam

35 to 60 inches—brown extremely gravelly sandy loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 6.4 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Pavohroo

Position on landscape: North- and east-facing, concave slopes

Typical profile:

0 to 1 inch—slightly decomposed plant material

1 to 7 inches—dark brown gravelly silt loam

7 to 16 inches—brown silt loam

16 to 39 inches—brown and light yellowish brown gravelly silt loam

39 to 61 inches—light yellowish brown gravelly clay loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 10.3 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Minor Components

- Calpac soils on northeast-facing slopes (10 percent)
- Ireland soils on east-facing slopes (5 percent)
- Rock outcrop on shoulders (5 percent)

Use and Management

Major use: Rangeland

Major management factors: Depth to bedrock in some areas, rock fragments on the surface, available water capacity in some areas, water erosion, and slope

Dominant vegetation in natural potential plant community: Hymas—low sagebrush and bluebunch wheatgrass; Povey—mountain big sagebrush and bluebunch wheatgrass; Pavohroo—quaking aspen

General management considerations:

- Seeding of adapted species to improve the range is limited by the depth to bedrock in some areas, rock fragments on the surface, water erosion, and slope.
- Uniform distribution of grazing is difficult because of the slope or lack of permanent water developments, or both.
- Production is limited mainly by the depth to bedrock in some areas and the restricted available water capacity in some areas.
- Use of equipment is limited by the rock fragments on the surface and by slope.

Interpretive Groups

Land capability classification: Hymas—7s, nonirrigated; Povey and Pavohroo—7e, nonirrigated

Ecological site: Hymas—Shallow Stony, 12- to 16-inch precipitation zone; Povey—Steep Slope, 16- to 22-inch precipitation zone; Pavohroo—Moist Mountain Loam, 20+-inch precipitation zone

49—Inkom silt loam, 0 to 1 percent slopes

Composition

Inkom and similar soils—85 percent

Minor components—15 percent

Setting

Landform: Flood plains

Elevation: 5,000 to 5,600 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 44 degrees F

Frost-free period—80 to 100 days

Characteristics of Inkom

Typical profile:

0 to 6 inches—dark grayish brown and grayish brown silt loam

6 to 60 inches—dark grayish brown, dark gray, very dark gray, light gray, and white silt loam

Depth class: Very deep

Drainage class: Poorly drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: Water-tolerant plants—60 inches or more; non-water-tolerant plants—0 to 18 inches

Runoff: Negligible

Hazard of erosion: By water—none or slight

Depth to seasonal high water table: At the surface to a depth of 18 inches below the surface in February through June

Frequency of flooding: Frequent

Minor Components

- Broadhead soils on slightly higher, convex slopes (5 percent)
- Hondo soils that have slopes of more than 1 percent (5 percent)
- Rexburg soils that have slopes of more than 1 percent (5 percent)

Use and Management

Major uses: Irrigated and nonirrigated pastureland, irrigated cropland, and rangeland

Major management factors: Growing season, wetness, and flooding

Irrigated and nonirrigated pastureland

Suitable crops: Water-tolerant grasses

General management considerations:

- To maintain the quality of meadows and to produce good yields of forage, conservation practices such as using an irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.
- Fencing, livestock watering facilities, and a planned grazing system are needed in areas used for pasture.
- The seasonal high water table provides supplemental moisture for plants.

Irrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- The seasonal high water table provides supplemental moisture for plants.

Rangeland

Dominant vegetation in natural potential plant community: Willow and sedge

General management considerations:

- Seeding of adapted species to improve the range is limited by wetness and flooding.
- Periodic flooding increases the amount of moisture available for plants and thus increases the amount of forage produced.

Interpretive Groups

Land capability classification: 4w, irrigated and nonirrigated

Ecological site: Riparian Wet Meadow

50—Iphil-Ririe-Watercanyon complex, 8 to 20 percent slopes

Composition

*Iphil and similar soils—*50 percent

*Ririe and similar soils—*20 percent

*Watercanyon and similar soils—*15 percent

*Minor components—*15 percent

Setting

Landform: Fan remnants and hills

Elevation: 5,000 to 5,900 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 44 degrees F

Frost-free period—70 to 115 days

Characteristics of Iphil

Position on landscape: Convex or smooth slopes

Typical profile:

0 to 10 inches—brown silt loam

10 to 36 inches—light gray and very pale brown silt loam

36 to 60 inches—very pale brown loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Characteristics of Ririe

Position on landscape: Smooth or slightly concave slopes

Typical profile:

0 to 14 inches—grayish brown and brown silt loam

14 to 63 inches—very pale brown and light yellowish brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12.6 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Characteristics of Watercanyon

Position on landscape: Concave slopes

Typical profile:

0 to 5 inches—pale brown silt loam

5 to 33 inches—pale brown and very pale brown silt loam

33 to 62 inches—very pale brown very fine sandy loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 8.9 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Minor Components

- Cedarhill soils on south-facing, smooth or concave slopes (5 percent)
- Soils that have slopes of less than 8 percent or more than 20 percent (5 percent)
- Watercanyon soils on north-facing, convex slopes (5 percent)

Use and Management

Major use: Nonirrigated cropland

Major management factors: Growing season, depth to carbonates, water erosion, and slope

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion and conserve moisture by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, and returning crop residue to the soil.

Interpretive Groups

Land capability classification: Iphil—4e, nonirrigated; Ririe and Watercanyon—3e, nonirrigated

51—Ireland-Calpac association, 30 to 60 percent slopes

Composition

*Ireland and similar soils—*40 percent

*Calpac and similar soils—*35 percent

*Minor components—*25 percent

Setting

Landform: Mountains and ridges

Elevation: 5,200 to 7,200 feet

Climatic data (mean annual):

Precipitation—about 20 inches

Air temperature—about 43 degrees F

Frost-free period—70 to 90 days

Characteristics of Ireland

Position on landscape: Slightly convex slopes

Typical profile:

0 to 8 inches—grayish brown very gravelly silt loam

8 to 28 inches—grayish brown and brown extremely cobbly silt loam

28 inches—highly fractured limestone

Depth class: Moderately deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 2 inches

Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Calpac

Position on landscape: Concave slopes

Typical profile:

0 to 8 inches—dark brown gravelly silt loam

8 to 15 inches—dark brown very gravelly silt loam

15 to 23 inches—brown extremely cobbly silt loam

23 to 60 inches—brown extremely cobbly silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 4.9 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Minor Components

- Pavohroo soils on concave slopes (10 percent)
- Yago soils on ridges and concave slopes (10 percent)
- Povey soils on northeast-facing slopes (3 percent)
- Ridgecrest soils on northeast-facing slopes (2 percent)

Use and Management

Major use: Rangeland

Major management factors: Rock fragments on the surface, available water capacity, water erosion, and slope

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by the rock fragments on the surface, water erosion, and slope.
- Uniform distribution of grazing is difficult because of the slope or the lack of permanent water developments, or both.
- Production is limited mainly by the restricted available water capacity.
- Use of equipment is limited by the rock fragments on the surface and slope.

Interpretive Groups

Land capability classification: 7e, nonirrigated

Ecological site: Steep Slope, 16- to 22-inch precipitation zone

52—Jensen silt loam, 0 to 2 percent slopes

Composition

Jensen and similar soils—80 percent

Minor components—20 percent

Setting

Landform: Depressions of lake terraces and fan remnants

Elevation: 4,900 to 5,900 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free season—80 to 100 days

Characteristics of Jensen

Typical profile:

0 to 12 inches—brown silt loam

12 to 45 inches—brown and yellowish brown gravelly silt loam

45 to 60 inches—pale brown and gray very gravelly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 9.2 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—none or slight

Minor Components

- Jovine soils on slightly lower, smooth to concave slopes (10 percent)
- Soils that are in convex areas and have more than 35 percent rock fragments at a depth of 10 to 40 inches (10 percent)

Use and Management

Major use: Nonirrigated cropland

Major management factor: Rock fragments on the surface

Suitable crops: Wheat and barley

General management consideration:

- Rock fragments on the surface make seedbed preparation difficult.

Interpretive Groups

Land capability classification: 3c, nonirrigated

53—Jensen silt loam, 2 to 6 percent slopes

Composition

*Jensen and similar soils—*80 percent

*Minor components—*20 percent

Setting

Landform: Fan remnants

Elevation: 4,900 to 5,900 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free season—80 to 100 days

Characteristics of Jensen

Typical profile:

0 to 12 inches—brown silt loam

12 to 45 inches—brown and yellowish brown gravelly silt loam

45 to 60 inches—pale brown and gray very gravelly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 9.2 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—moderate

Minor Components

- Soils that have slopes of less than 2 percent or more than 6 percent (5 percent)

- Soils on west-facing, convex slopes that have more than 35 percent rock fragments at a depth of 10 to 40 inches (10 percent)
- Soils on west-facing, convex slopes that have more than 18 percent clay and less than 15 percent rock fragments (5 percent)

Use and Management

Major use: Nonirrigated cropland

Major management factors: Rock fragments on the surface and water erosion

Suitable crops: Wheat and barley

General management considerations:

- Rock fragments on the surface make seedbed preparation difficult.
- Reduce the risk of water erosion and conserve moisture by constructing terraces, maintaining crop residue on the soil surface, regularly adding organic matter, and limiting the number of tillage operations.

Interpretive Groups

Land capability classification: 3e, nonirrigated

54—Jensen-Iphil-Wursten complex, 4 to 12 percent slopes

Composition

*Jensen and similar soils—*30 percent

*Iphil and similar soils—*25 percent

*Wursten and similar soils—*25 percent

*Minor components—*20 percent

Setting

Landform: Fan remnants

Elevation: 4,900 to 5,900 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 44 degrees F

Frost-free period—75 to 100 days

Characteristics of Jensen

Position on landscape: Slightly concave or smooth slopes

Slope: 8 to 12 percent

Typical profile:

0 to 12 inches—brown silt loam

12 to 45 inches—brown and yellowish brown gravelly silt loam

45 to 60 inches—pale brown and gray very gravelly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 9.2 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Iphil

Position on landscape: Concave slopes

Slope: 4 to 8 percent

Typical profile:

- 0 to 10 inches—brown silt loam
- 10 to 36 inches—very pale brown silt loam
- 36 to 60 inches—very pale brown loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderate*Available water capacity:* 12 inches*Potential rooting depth:* 60 inches or more*Runoff:* Medium*Hazard of erosion:* By water—moderate***Characteristics of Wursten****Position on landscape:* Slightly convex slopes*Slope:* 4 to 8 percent*Typical profile:*

- 0 to 14 inches—grayish brown gravelly silt loam
- 14 to 60 inches—very pale brown gravelly loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderate*Available water capacity:* 8.5 inches*Potential rooting depth:* 60 inches or more*Runoff:* Medium*Hazard of erosion:* By water—moderate***Minor Components***

- Cedarhill soils on south-facing, convex slopes (5 percent)
- Hades soils on north-facing, concave slopes (5 percent)
- Justesen soils on smooth or concave slopes (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (5 percent)

Use and Management*Major uses:* Nonirrigated and irrigated cropland*Major management factors:* Growing season, depth to carbonates, rock fragments on the surface in some areas, water erosion, and slope*Suitable crops:* Wheat and barley*General management considerations:*

- The short growing season limits the choice of crops.
- The most suitable irrigation method is a sprinkler system.
- Rock fragments on the surface in some areas make seedbed preparation difficult.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion and conserve moisture by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, and maintaining crop residue on the soil surface.

Interpretive Groups*Land capability classification:* 4e, irrigated, and 3e, nonirrigated

55—Jovine silt loam, 0 to 2 percent slopes

Composition

Jovine and similar soils—80 percent

Minor components—20 percent

Setting

Landform: Depressions and low stream terraces

Elevation: 4,900 to 5,200 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free season—80 to 100 days

Characteristics of Jovine

Typical profile:

0 to 7 inches—grayish brown silt loam

7 to 60 inches—brown and dark grayish brown silt loam

Depth class: Very deep

Drainage class: Moderately well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Depth to seasonal high water table: 60 to 72 inches in April through June

Runoff: Negligible

Hazard of erosion: By water—none or slight

Frequency of flooding: Rare

Minor Components

- Jensen soils on slightly lower, smooth or concave slopes near depressions (10 percent)
- Soils that are on concave slopes near depressions and have a dark-colored surface layer that is 20 to 30 inches thick (5 percent)
- Toefoot soils in depressions (3 percent)
- Inkom soils in depressions (2 percent)

Use and Management

Major uses: Irrigated and nonirrigated cropland and hayland, and rangeland

Major management factor: Growing season

Irrigated and nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The most suitable irrigation method is a sprinkler system.
- The short growing season limits the choice of crops.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.

Irrigated and nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Rangeland

Dominant vegetation in natural potential plant community: Basin big sagebrush and basin wildrye

General management consideration:

- The limitations for use as rangeland are minimal if proper grazing management is used.

Interpretive Groups

Land capability classification: 3c, irrigated and nonirrigated

Ecological site: Loamy Bottom, 12- to 16-inch precipitation zone

56—Justesen silt loam, 4 to 12 percent slopes***Composition***

*Justesen and similar soils—*75 percent

*Minor components—*25 percent

Setting

Landform: Fan remnants

Elevation: 4,800 to 6,000 feet

Climatic data (mean annual):

Precipitation—about 14 inches

Air temperature—about 43 degrees F

Frost-free period—80 to 100 days

Characteristics of Justesen

Typical profile:

0 to 16 inches—grayish brown silt loam

16 to 27 inches—dark brown and brown silty clay loam

27 to 60 inches—light brown, brownish yellow, and very pale brown gravelly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 10.7 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Araveton soils on toeslopes (5 percent)
- Arbone soils on broad, convex slopes (5 percent)
- Ecur soils on concave slopes (2 percent)
- Lanoak soils on concave slopes (3 percent)
- Rexburg soils on broad, convex slopes (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (5 percent)

Use and Management

Major uses: Nonirrigated cropland, and rangeland

Major management factors: Growing season, rock fragments on the surface, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Rock fragments on the surface make seedbed preparation difficult.
- Minimize the risk of erosion and conserve moisture by constructing terraces, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Rangeland

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.

Interpretive Groups

Land capability classification: 3e, nonirrigated

Ecological site: Loamy, 13- to 16-inch precipitation zone

57—Justesen silt loam, 12 to 25 percent slopes***Composition***

Justesen and similar soils—75 percent

Minor components—25 percent

Setting

Landform: Fan remnants

Elevation: 4,800 to 6,000 feet

Climatic data (mean annual):

Precipitation—about 14 inches

Air temperature—about 43 degrees F

Frost-free period—80 to 100 days

Characteristics of Justesen*Typical profile:*

0 to 16 inches—grayish brown silt loam

16 to 27 inches—dark brown and brown silty clay loam

27 to 60 inches—light brown, brownish yellow, and very pale brown gravelly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 10.7 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Minor Components

- Araveton soils on toeslopes (5 percent)
- Arbone soils on broad, convex slopes (10 percent)
- Hondoho soils on toeslopes (5 percent)
- Manila soils on broad, smooth slopes (5 percent)

Use and Management

Major uses: Nonirrigated cropland, and rangeland

Major management factors: Growing season, rock fragments on the surface, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Rock fragments on the surface make seedbed preparation difficult.
- Minimize the risk of erosion and conserve moisture by maintaining crop residue on the soil surface and limiting the number of tillage operations.

Rangeland

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Seeding of adapted species to improve the range is limited by water erosion.
- After seeding, defer grazing until young plants are well established.

Interpretive Groups

Land capability classification: 4e, nonirrigated

Ecological site: Loamy, 13- to 16-inch precipitation zone

58—Justesen-Ririe-Buist complex, 12 to 20 percent slopes

Composition

Justesen and similar soils—50 percent

Ririe and similar soils—30 percent

Buist and similar soils—15 percent

Minor components—5 percent

Setting

Landform: Hills and fan remnants

Elevation: 5,000 to 6,000 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free period—85 to 95 days

Characteristics of Justesen

Position on landscape: Slightly convex slopes

Typical profile:

0 to 8 inches—dark grayish brown silt loam

8 to 27 inches—brown and light yellowish brown silt loam and silty clay loam

27 to 45 inches—light yellowish brown silt loam

45 to 60 inches—light yellowish brown and very pale brown gravelly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 10.7 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Characteristics of Ririe

Position on landscape: Slightly convex or smooth slopes

Typical profile:

0 to 14 inches—grayish brown and brown silt loam

14 to 63 inches—very pale brown and light yellowish brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12.6 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Characteristics of Buist

Position on landscape: Convex slopes

Typical profile:

0 to 15 inches—brown gravelly silt loam

15 to 28 inches—brown and very pale brown very gravelly loam

28 to 60 inches—very pale brown extremely gravelly fine sandy loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 5.9 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Minor Components

- Soils that have slopes of less than 12 percent or more than 20 percent (5 percent)

Use and Management

Major use: Nonirrigated cropland

Major management factors: Growing season, depth to carbonates, rock fragments on the surface in some areas, available water capacity in some areas, water erosion, and slope

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Rock fragments on the surface make seedbed preparation difficult.
- Minimize the risk of erosion and conserve moisture by chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Interpretive Groups

Land capability classification: 4e, nonirrigated

59—Kearns silt loam, 0 to 2 percent slopes

Composition

Kearns and similar soils—80 percent

Minor components—20 percent

Setting

Landform: Lake terraces

Elevation: 4,400 to 5,200 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 48 degrees F

Frost-free season—100 to 120 days

Characteristics of Kearns

Typical profile:

0 to 8 inches—grayish brown silt loam

8 to 32 inches—light brownish gray and pale brown silt loam

32 to 67 inches—very pale brown and light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Negligible

Hazard of erosion: By water—none or slight

Minor Components

- Arbone soils on adjacent higher terrace slopes (5 percent)
- Neeley soils on convex slopes (10 percent)
- Parleys and DeJarnet soils on convex slopes (5 percent)

Use and Management

Major uses: Irrigated and nonirrigated cropland and hayland

Major management factor: Depth to carbonates

Irrigated and nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.

Irrigated and nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: 2c, irrigated, and 3c, nonirrigated

60—Kearns silt loam, 2 to 4 percent slopes

Composition

Kearns and similar soils—75 percent

Minor components—25 percent

Setting

Landform: Lake terraces

Elevation: 4,400 to 5,200 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 48 degrees F

Frost-free season—100 to 120 days

Characteristics of Kearns

Typical profile:

0 to 8 inches—grayish brown silt loam

8 to 32 inches—light brownish gray and pale brown silt loam

32 to 67 inches—very pale brown and light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—slight

Minor Components

- Neeley soils on convex slopes (5 percent)
- Parleys soils on concave slopes (10 percent)
- Pollynot soils on convex slopes (10 percent)

Use and Management

Major uses: Irrigated and nonirrigated cropland and hayland

Major management factor: Depth to carbonates

Irrigated and nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.

Irrigated and nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls

irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: 2c, irrigated, and 3c, nonirrigated

61—Kidman fine sandy loam, 1 to 4 percent slopes

Composition

Kidman and similar soils—90 percent

Minor components—10 percent

Setting

Landform: Lake terraces

Elevation: 4,500 to 4,800 feet

Climatic data (mean annual):

Precipitation—about 14 inches

Air temperature—about 48 degrees F

Frost-free period—110 to 120 days

Characteristics of Kidman

Typical profile:

0 to 17 inches—brown and grayish brown fine sandy loam

17 to 38 inches—grayish brown fine sandy loam

38 to 66 inches—pale brown loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately rapid

Available water capacity: 7.3 inches

Potential rooting depth: 60 inches or more

Runoff: Very low

Hazard of erosion: By water—slight; by wind—moderate

Minor Components

- Preston soils on convex slopes (5 percent)
- Soils that are on smooth terraces and have more than 15 percent fine sand or coarser material at a depth of 10 to 40 inches (5 percent)

Use and Management

Major uses: Irrigated cropland and hayland

Major management factor: Wind erosion

Irrigated cropland

Suitable crop: Barley

General management considerations:

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity, the water intake rate, and the needs of the crop grown to avoid overirrigating and leaching of plant nutrients.
- Minimize the risk of erosion and conserve moisture by planting crops in narrow strips at right angles to the prevailing wind, subsoiling, and maintaining crop residue on the soil surface.

Irrigated hayland*Suitable crop:* Alfalfa hay*General management considerations:*

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Interpretive Groups*Land capability classification:* 2e, irrigated, and 3e, nonirrigated**62—Kidman-Preston association, 2 to 12 percent slopes*****Composition****Kidman and similar soils*—60 percent*Preston and similar soils*—25 percent*Minor components*—15 percent***Setting****Landform:* Lake terraces*Elevation:* 4,500 to 4,800 feet*Climatic data (mean annual):*

Precipitation—about 14 inches

Air temperature—about 47 degrees F

Frost-free period—110 to 130 days

Characteristics of Kidman*Position on landscape:* Smooth slopes*Typical profile:*

0 to 17 inches—brown and grayish brown fine sandy loam

17 to 38 inches—grayish brown fine sandy loam

38 to 66 inches—pale brown loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderately rapid*Available water capacity:* 7.3 inches*Potential rooting depth:* 60 inches or more*Runoff:* Very low*Hazard of erosion:* By water—moderate; by wind—moderate***Characteristics of Preston****Position on landscape:* Convex slopes*Typical profile:*

0 to 3 inches—grayish brown fine sand

3 to 65 inches—grayish brown and pale brown fine sand

Depth class: Very deep*Drainage class:* Excessively drained*Permeability:* Rapid*Available water capacity:* 3.3 inches*Potential rooting depth:* 60 inches or more*Runoff:* Low*Hazard of erosion:* By water—moderate; by wind—severe

Minor Components

- Hans soils on lower, convex slopes (5 percent)
- Kearns soils on convex slopes (5 percent)
- Welby soils on concave slopes (5 percent)

Use and Management

Major uses: Irrigated cropland and hayland, and rangeland

Major management factors: Permeability in some areas, available water capacity in some areas, water erosion, wind erosion, and slope

Irrigated cropland

Suitable crop: Barley

General management considerations:

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity, the water intake rate, and the needs of the crop grown to avoid overirrigating and leaching of plant nutrients.
- Reduce the risks of water and wind erosion and conserve moisture by maintaining crop residue on the soil surface, planting crops in narrow strips at right angles to the prevailing wind, and limiting the number of tillage operations.

Irrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Rangeland

Dominant vegetation in natural potential plant community: Kidman—antelope bitterbrush and Indian ricegrass; Preston—basin big sagebrush and Indian ricegrass

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Seeding of adapted species to improve the range is limited by the restricted available water capacity in some areas, water erosion, and wind erosion.
- Production is limited mainly by the restricted available water capacity in some areas and by wind erosion.

Interpretive Groups

Land capability classification: Kidman—3e, irrigated and nonirrigated; Preston—4s, irrigated, and 6s, nonirrigated

Ecological site: Kidman—Sand, 12- to 16-inch precipitation zone; Preston—Sand, 8- to 12-inch precipitation zone

63—Kucera silt loam, 4 to 12 percent slopes

Composition

Kucera and similar soils—85 percent

Minor components—15 percent

Setting

Landform: Lake terraces

Elevation: 4,400 to 5,300 feet

Climatic data (mean annual):

Precipitation—about 14 inches

Air temperature—about 45 degrees F

Frost-free period—90 to 100 days

Characteristics of Kucera

Typical profile:

0 to 22 inches—dark grayish brown and brown silt loam

22 to 42 inches—pale brown silt loam

42 to 60 inches—very pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Bothwell soils on concave slopes (10 percent)
- Jensen soils on convex slopes (5 percent)

Use and Management

Major uses: Irrigated and nonirrigated cropland, irrigated and nonirrigated hayland, and nonirrigated pastureland

Major management factors: Growing season and water erosion

Irrigated and nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- Minimize the risk of erosion and conserve moisture by maintaining crop residue on the soil surface, farming across the slope, and constructing terraces, diversions, and grassed waterways.

Irrigated and nonirrigated hayland and nonirrigated pastureland

Suitable crops: Alfalfa hay and pasture

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay and forage, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.
- Fencing, livestock watering facilities, and a planned grazing system are needed in areas used for pasture.

Interpretive Groups

Land capability classification: 4e, irrigated, and 3e, nonirrigated

64—Lagonot silt loam, 0 to 3 percent slopes

Composition

Lagonot and similar soils—90 percent

Minor components—10 percent

Setting

Landform: Lake terraces and flood plains

Elevation: 4,300 to 4,700 feet

Climatic data (mean annual):

Precipitation—about 13 inches

Air temperature—about 46 degrees F

Frost-free period—100 to 110 days

Characteristics of Lagonot

Typical profile:

0 to 10 inches—grayish brown silt loam

10 to 60 inches—light brownish gray, light gray, and pale yellow silt loam

Depth class: Very deep

Drainage class: Somewhat poorly drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: Water-tolerant plants—60 inches or more; non-water-tolerant plants—18 to 42 inches

Runoff: Low

Hazard of erosion: By water—none or slight; by wind—moderate

Depth to seasonal high water table: 18 to 42 inches in October through June

Frequency of flooding: Rare

Minor Components

- Soils that are on relict oxbows and have more than 15 percent fine sand or coarser material between depths of 10 and 40 inches (3 percent)
- Soils that are on raised convex mounds, are calcareous throughout, and have a dark-colored surface layer that is 20 to 35 inches thick (3 percent)
- Fridlo soils on slightly higher mounds (2 percent)
- Logan soils in depressions (2 percent)

Use and Management

Major uses: Irrigated and nonirrigated cropland, hayland, and pastureland

Major management factors: Wetness and wind erosion

Irrigated and nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The seasonal high water table provides supplemental moisture for plants.
- Because of the limited precipitation during the growing season, this unit is not suited to continuous cropping unless it is irrigated.
- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- Maintain tilth, fertility, and the water intake rate by limiting the number of tillage operations.
- Minimize the risk of erosion and conserve moisture by limiting the number of tillage

operations, planting crops in narrow strips at right angles to the prevailing wind, subsoiling, and maintaining crop residue on the soil surface.

Irrigated and nonirrigated hayland and pastureland

Suitable crops: Alfalfa hay and pasture

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay and forage, conservation practices such as using an irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.
- Fencing, livestock watering facilities, and a planned grazing system are needed in areas used for pasture.
- The seasonal high water table provides supplemental moisture for plants.

Interpretive Groups

Land capability classification: 3w, irrigated and nonirrigated

65—Langless silt loam, 0 to 2 percent slopes

Composition

Langless and similar soils—85 percent

Minor components—15 percent

Setting

Landform: Low lake terraces

Elevation: 4,300 to 4,500 feet

Climatic data (mean annual):

Precipitation—about 13 inches

Air temperature—about 47 degrees F

Frost-free season—100 to 120 days

Characteristics of Langless

Typical profile:

0 to 3 inches—slightly decomposed plant material

3 to 9 inches—dark gray silt loam

9 to 47 inches—gray, white, and very pale brown silt loam

47 to 63 inches—light gray silt loam

Depth class: Very deep

Drainage class: Poorly drained

Permeability: Moderate

Available water capacity: 11 inches

Potential rooting depth: Water-tolerant plants—60 inches or more; non-water-tolerant plants—12 to 18 inches

Runoff: Negligible

Hazard of erosion: By water—none or slight

Depth to seasonal high water table: 12 to 18 inches in October through June

Frequency of flooding: Frequent

Minor Components

- Logan soils on slightly convex slopes (5 percent)
- Soils that are on slightly higher terraces and have a high water table at a depth of 18 to 36 inches in spring (5 percent)
- Soils that are on slightly higher terraces, are calcareous throughout, and average more than 18 percent clay between depths of 10 and 40 inches (3 percent)

- Soils that are on terraces and have accumulations of salt in the upper 40 inches (2 percent)

Use and Management

Major uses: Irrigated pastureland, and rangeland

Major management factors: Depth to carbonates, wetness, and flooding

Irrigated pastureland

Suitable crops: Water-tolerant grasses

General management considerations:

- To maintain the quality of meadows and to produce good yields of forage, conservation practices such as using an irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.
- Fencing, livestock watering facilities, and a planned grazing system are needed in areas used for pasture.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- The quality of the forage is limited by the seasonal high water table and the frequency of flooding.

Rangeland

Dominant vegetation in natural potential plant community: Tufted hairgrass and sedge

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Periodic flooding increases the amount of moisture available for plants and thus increases the amount of forage produced.
- The use of equipment is limited by wetness.

Interpretive Groups

Land capability classification: 5w, irrigated and nonirrigated

Ecological site: Wet Meadow

66—Langless-Logan complex, 0 to 2 percent slopes

Composition

*Langless and similar soils—*55 percent

*Logan and similar soils—*30 percent

*Minor components—*15 percent

Setting

Landform: Low lake terraces

Elevation: 4,300 to 4,700 feet

Climatic data (mean annual):

Precipitation—about 13 inches

Air temperature—about 46 degrees F

Frost-free period—110 to 130 days

Characteristics of Langless

Position on landscape: Concave slopes

Typical profile:

0 to 3 inches—slightly decomposed plant material

3 to 9 inches—dark gray silt loam

9 to 47 inches—gray, white, and very pale brown silt loam

47 to 63 inches—light gray silt loam

Depth class: Very deep

Drainage class: Poorly drained

Permeability: Moderate

Available water capacity: 11 inches

Potential rooting depth: Water-tolerant plants—60 inches or more; non-water-tolerant plants—12 to 18 inches

Runoff: Negligible

Hazard of erosion: By water—none or slight

Depth to seasonal high water table: 12 to 18 inches in October through June

Frequency of flooding: Frequent

Characteristics of Logan

Position on landscape: Convex slopes

Typical profile:

0 to 4 inches—slightly decomposed plant material

4 to 22 inches—gray silt loam

22 to 64 inches—gray and light gray silt loam

Depth class: Very deep

Drainage class: Poorly drained

Permeability: Moderately slow

Available water capacity: 13.8 inches

Potential rooting depth: Water-tolerant plants—60 inches or more; non-water-tolerant plants—0 to 18 inches

Runoff: Negligible

Hazard of erosion: By water—none or slight

Depth to seasonal high water table: At the surface to a depth of 18 inches below the surface in March through July

Frequency of flooding: Rare

Minor Components

- Bloor soils near relict oxbows (10 percent)
- Fridlo soils on slightly higher mounds (5 percent)

Use and Management

Major uses: Irrigated pastureland, and rangeland

Major management factors: Depth to carbonates, wetness, and flooding

Irrigated pastureland

Suitable crops: Water-tolerant grasses

General management considerations:

- To maintain the quality of meadows and to produce good yields of forage, conservation practices such as using an irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.
- Fencing, livestock watering facilities, and a planned grazing system are needed in areas used for pasture.
- The seasonal high water table provides supplemental moisture for plants.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- The quality of the forage is limited by the seasonal high water table and the frequency of flooding.

Rangeland

Dominant vegetation in natural potential plant community: Tufted hairgrass and sedge

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Periodic flooding increases the amount of moisture available for plants and thus increases the amount of forage produced.
- The use of equipment is limited by wetness.

Interpretive Groups

Land capability classification: 5w, irrigated and nonirrigated

Ecological site: Wet Meadow

67—Lanoak silt loam, 0 to 4 percent slopes***Composition***

*Lanoak and similar soils—*90 percent

*Minor components—*10 percent

Setting

Landform: Fan remnants

Elevation: 5,100 to 6,000 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 43 degrees F

Frost-free period—80 to 100 days

Characteristics of Lanoak

Typical profile:

0 to 30 inches—grayish brown and brown silt loam

30 to 60 inches—pale brown and light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—slight

Minor Components

- Rexburg soils on convex slopes (5 percent)
- Soils that have slopes of more than 4 percent (5 percent)

Use and Management

Major uses: Nonirrigated cropland and hayland

Major management factor: Growing season

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- A tillage pan forms easily if the soil is tilled when wet.

Nonirrigated hayland*Suitable crop:* Alfalfa hay*General management considerations:*

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as managing nutrients and maintaining plant vigor are needed.

Interpretive Groups*Land capability classification:* 3c, nonirrigated**68—Lanoak silt loam, 12 to 30 percent slopes*****Composition****Lanoak and similar soils—*90 percent*Minor components—*10 percent***Setting****Landform:* Fan remnants*Elevation:* 5,100 to 6,000 feet*Climatic data (mean annual):*

Precipitation—about 16 inches

Air temperature—about 42 degrees F

Frost-free period—80 to 100 days

Characteristics of Lanoak*Typical profile:*

0 to 30 inches—grayish brown and brown silt loam

30 to 60 inches—pale brown and light gray silt loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderate*Available water capacity:* 12 inches*Potential rooting depth:* 60 inches or more*Runoff:* High*Hazard of erosion:* By water—severe***Minor Components***

- Bothwell soils on convex slopes (5 percent)
- Soils that have slopes of less than 12 percent or more than 30 percent (5 percent)

Use and Management*Major uses:* Nonirrigated cropland and hayland*Major management factors:* Growing season, water erosion, and slope**Nonirrigated cropland***Suitable crops:* Wheat and barley*General management considerations:*

- The short growing season limits the choice of crops.
- Minimize the risk of erosion and conserve moisture by chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, rotating crops, and limiting the number of tillage operations.

Nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as managing nutrients and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: 4e, nonirrigated

69—Lanoak-Hondoho complex, 6 to 20 percent slopes***Composition***

*Lanoak and similar soils—*45 percent

*Hondoho and similar soils—*35 percent

*Minor components—*20 percent

Setting

Landform: Fan remnants and hills

Elevation: 5,000 to 6,700 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 43 degrees F

Frost-free period—75 to 100 days

Characteristics of Lanoak

Position on landscape: Backslopes

Slope: 6 to 15 percent

Typical profile:

0 to 30 inches—grayish brown and brown silt loam

30 to 60 inches—pale brown and light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Characteristics of Hondoho

Position on landscape: Concave slopes

Slope: 10 to 20 percent

Typical profile:

0 to 14 inches—dark brown and grayish brown gravelly silt loam

14 to 28 inches—brown very cobbly loam

28 to 60 inches—brown very cobbly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 7.1 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Minor Components

- Arbone soils on east- and south-facing, convex slopes (10 percent)
- Manila soils on higher lying convex slopes (10 percent)

Use and Management

Major uses: Nonirrigated cropland and hayland

Major management factors: Growing season, rock fragments on the surface in some areas, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Rock fragments on the surface in some areas make seedbed preparation difficult.
- Minimize the risk of erosion by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as managing nutrients and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: 3e, nonirrigated

70—Logan silt loam, 0 to 2 percent slopes

Composition

*Logan and similar soils—*95 percent

*Minor components—*5 percent

Setting

Landform: Low lake terraces and flood plains

Elevation: 4,300 to 4,700 feet

Climatic data (mean annual):

Precipitation—about 13 inches

Air temperature—about 46 degrees F

Frost-free period—110 to 130 days

Characteristics of Logan

Typical profile:

0 to 4 inches—slightly decomposed plant material

4 to 22 inches—gray silt loam

22 to 64 inches—gray and light gray silt loam

Depth class: Very deep

Drainage class: Poorly drained

Permeability: Moderately slow

Available water capacity: 13.8 inches

Potential rooting depth: Water-tolerant plants—60 inches or more; non-water-tolerant plants—0 to 18 inches

Runoff: Negligible

Hazard of erosion: By water—none or slight

Depth to seasonal high water table: At the surface to a depth of 18 inches below the surface in March through July

Frequency of flooding: Rare

Minor Components

- Soils that are on relict oxbows and have more than 15 percent fine sand or coarser material between depths of 10 and 40 inches (3 percent)
- Soils that are on convex mounds, are calcareous throughout, and have a dark-colored surface layer that is 20 to 35 inches thick (1 percent)
- Fridlo soils in slightly higher lying, convex areas (1 percent)

Use and Management

Major uses: Irrigated pastureland, and rangeland

Major management factors: Depth to carbonates, wetness, and flooding

Irrigated pastureland

Suitable crops: Water-tolerant grasses

General management considerations:

- To maintain the quality of meadows and to produce good yields of forage, conservation practices such as using an irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.
- Fencing, livestock watering facilities, and a planned grazing system are needed in areas used for pasture.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- The seasonal high water table provides supplemental moisture for plants.

Rangeland

Dominant vegetation in natural potential plant community: Tufted hairgrass and sedges

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Periodic flooding increases the amount of moisture available for plants and thus increases the amount of forage produced.
- The use of equipment is limited by wetness.

Interpretive Groups

Land capability classification: 5w, irrigated and nonirrigated

Ecological site: Wet Meadow

71—Lonigan-Lizdale association, 6 to 40 percent slopes

Composition

*Lonigan and similar soils—*45 percent

*Lizdale and similar soils—*35 percent

*Minor components—*20 percent

Setting

Landform: Mountains

Elevation: 4,800 to 6,400 feet

Climatic data (mean annual):

- Precipitation—about 16 inches
- Air temperature—about 43 degrees F
- Frost-free period—70 to 100 days

Characteristics of Lonigan

Position on landscape: South-facing, convex slopes

Slope: 12 to 40 percent

Typical profile:

- 0 to 11 inches—grayish brown very fine sandy loam
- 11 to 16 inches—light brownish gray very gravelly loam
- 16 to 33 inches—very pale brown very gravelly loam
- 33 inches—weathered tuff

Depth class: Moderately deep

Drainage class: Well drained

Permeability: Moderately rapid

Available water capacity: 4.5 inches

Restriction to rooting depth: Weathered tuff at a depth of 20 to 40 inches

Runoff: Medium

Hazard of erosion: By water—severe

Characteristics of Lizdale

Position on landscape: North-facing, concave slopes

Slope: 6 to 30 percent

Typical profile:

- 0 to 7 inches—dark grayish brown very gravelly silt loam
- 7 to 36 inches—brown very gravelly loam and pink very gravelly sandy loam
- 36 to 60 inches—light brown extremely gravelly sandy loam and extremely gravelly loamy sand

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately rapid

Available water capacity: 4.9 inches

Runoff: Medium

Hazard of erosion: By water—severe

Minor Components

- Copenhagen soils on higher lying backslopes (5 percent)
- Manila soils on smooth, lower lying backslopes (5 percent)
- Pavohroo soils on north-facing slopes (5 percent)
- Soils that have slopes of less than 6 percent or more than 40 percent (5 percent)

Use and Management

Major use: Rangeland (fig. 4)

Major management factors: Rock fragments on the surface in some areas, available water capacity, water erosion, and slope

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by the rock fragments on the surface in some areas, water erosion, and slope.
- Uniform distribution of grazing is difficult because of the slope or the lack of permanent water developments, or both.



Figure 4.—Typical area of Lizdale very gravelly silt loam in an area of Lonigan-Lizdale association, 6 to 40 percent slopes, in foreground. Copenhagen-Lonigan-Manila association, 12 to 50 percent slopes, is in background.

- Use of equipment is limited by the rock fragments on the surface in some areas and slope.

Interpretive Groups

Land capability classification: Lonigan—6e, nonirrigated; Lizdale—3e, nonirrigated

Ecological site: Lonigan—Ashy Loam, 13- to 16-inch precipitation zone; Lizdale—Loamy, 16- to 22-inch precipitation zone

72—Lostine silt loam, 20 to 30 percent slopes

Composition

Lostine and similar soils—75 percent

Minor components—25 percent

Setting

Landform: Fan remnants

Elevation: 5,300 to 5,800 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 43 degrees F

Frost-free period—80 to 100 days

Characteristics of Lostine

Typical profile:

0 to 7 inches—dark grayish brown silt loam

7 to 45 inches—brown silt loam
 45 to 60 inches—pale brown silt loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: 11.1 inches
Potential rooting depth: 60 inches or more
Runoff: High
Hazard of erosion: By water—severe

Minor Components

- Ririe soils on south-, north-, and west-facing, smooth slopes (10 percent)
- Kucera soils on smooth to slightly concave slopes (10 percent)
- Hondoho soils on concave slopes near depressions (5 percent)

Use and Management

Major use: Rangeland
Major management factor: Water erosion
Dominant vegetation in natural potential plant community: Mountain big sagebrush
 and bluebunch wheatgrass
General management considerations:

- Seeding of adapted species to improve the range is limited by water erosion.
- Uniform distribution of grazing is difficult because of the slope or the lack of permanent water developments, or both.

Interpretive Groups

Land capability classification: 6e, nonirrigated
Ecological site: Loamy, 13- to 16-inch precipitation zone

73—Manila silt loam, 4 to 12 percent slopes

Composition

Manila and similar soils—85 percent
Minor components—15 percent

Setting

Landform: Fan remnants
Elevation: 4,900 to 6,500 feet
Climatic data (mean annual):
 Precipitation—about 18 inches
 Air temperature—about 42 degrees F
 Frost-free period—70 to 90 days

Characteristics of Manila

Typical profile:
 0 to 5 inches—dark grayish brown silt loam
 5 to 45 inches—grayish brown, yellowish brown, and pale brown silty clay loam
 and silty clay
 45 to 60 inches—pale brown silt loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Available water capacity: 10.7 inches
Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—moderate

Minor Components

- Elevator soils on smooth to convex slopes (5 percent)
- Jensen soils in depressions and on concave slopes (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (2 percent)
- Thatcher soils on convex, lower lying slopes (3 percent)

Use and Management

Major uses: Nonirrigated cropland and hayland, and rangeland

Major management factors: Growing season, permeability, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Minimize the risk of erosion and increase the water intake rate by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as managing nutrients and maintaining plant vigor are needed.

Rangeland

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management consideration:

- The limitations for use as rangeland are minimal if proper grazing management is used.

Interpretive Groups

Land capability classification: 3e, nonirrigated

Ecological site: Loamy, 16- to 22-inch precipitation zone

74—Manila-Broadhead complex, 4 to 12 percent slopes

Composition

Manila and similar soils—45 percent

Broadhead and similar soils—30 percent

Minor components—25 percent

Setting

Landform: Plains and fan remnants

Elevation: 5,000 to 5,900 feet

Climatic data (mean annual):

Precipitation—about 18 inches

Air temperature—about 43 degrees F

Frost-free period—70 to 100 days

Characteristics of Manila

Position on landscape: Convex or slightly concave slopes

Typical profile:

0 to 5 inches—brown silt loam

5 to 45 inches—brown, yellowish brown, light brown, and pink silty clay loam and silty clay

45 to 60 inches—pink silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Slow

Available water capacity: 10.7 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—moderate

Characteristics of Broadhead

Position on landscape: Convex slopes

Typical profile:

0 to 9 inches—dark grayish brown silt loam

9 to 36 inches—dark grayish brown, brown, and yellowish brown silty clay loam and silty clay

36 to 60 inches—very pale brown gravelly silty clay and gravelly clay loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Impermeable

Available water capacity: 10.5 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—moderate

Minor Components

- Thatcher soils on convex slopes (10 percent)
- Obnot soils on concave slopes (5 percent)
- Rexburg soils on convex slopes (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (5 percent)

Use and Management

Major uses: Nonirrigated cropland (fig. 5), and rangeland (fig. 6)

Major management factors: Growing season, permeability, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Minimize the risk of erosion and increase the water intake rate by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Rangeland

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management consideration:

- The limitations for use as rangeland are minimal if proper grazing management is used.



Figure 5.—Typical area of Broadhead silt loam in an area of Manila-Broadhead complex, 4 to 12 percent slopes, in foreground. Manila silt loam is in background.



Figure 6.—Typical area of Manila silt loam in an area of Manila-Broadhead complex, 4 to 12 percent slopes, in foreground. Oxford Mountain is in background.

Interpretive Groups

Land capability classification: 3e, nonirrigated

Ecological site: Loamy, 16- to 22-inch precipitation zone

75—Manila-Broadhead complex, 12 to 30 percent slopes

Composition

Manila and similar soils—45 percent

Broadhead and similar soils—30 percent

Minor components—25 percent

Setting

Landform: Plains and fan remnants

Elevation: 4,900 to 6,500 feet

Climatic data (mean annual):

Precipitation—about 18 inches

Air temperature—about 43 degrees F

Frost-free period—70 to 100 days

Characteristics of Manila

Position on landscape: Convex and slightly concave slopes

Typical profile:

0 to 5 inches—grayish brown silt loam

5 to 45 inches—light brown silty clay loam and silty clay

45 to 60 inches—light brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Slow

Available water capacity: 10.7 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Broadhead

Position on landscape: Convex slopes

Typical profile:

0 to 9 inches—dark grayish brown silt loam

9 to 36 inches—dark grayish brown, brown, and yellowish brown silty clay loam and silty clay

36 to 60 inches—yellowish brown gravelly silt loam and very pale brown gravelly clay loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Impermeable

Available water capacity: 10.5 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Minor Components

- Yago soils on steep slopes and in depressions (10 percent)
- Obnot soils on concave slopes (5 percent)
- Soils that have slopes of less than 12 percent or more than 30 percent (5 percent)
- Thatcher soils on convex slopes (5 percent)

Use and Management

Major uses: Nonirrigated cropland, and rangeland

Major management factors: Growing season, permeability, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Minimize the risk of erosion and increase the water intake rate by chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Rangeland

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Seeding of adapted species to improve the range is limited by water erosion.

Interpretive Groups

Land capability classification: 4e, nonirrigated

Ecological site: Loamy, 16- to 22-inch precipitation zone

76—Manila-Lonigan complex, 6 to 40 percent slopes***Composition***

*Manila and similar soils—*50 percent

*Lonigan and similar soils—*30 percent

*Minor components—*20 percent

Setting

Landform: Mountains and fan remnants

Elevation: 4,800 to 6,500 feet

Climatic data (mean annual):

Precipitation—about 17 inches

Air temperature—about 43 degrees F

Frost-free period—70 to 95 days

Characteristics of Manila

Position on landscape: Convex slopes and slightly concave toeslopes

Typical profile:

0 to 5 inches—dark grayish brown silt loam

5 to 45 inches—grayish brown, yellowish brown, and pale brown silty clay loam and silty clay

45 to 60 inches—pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Slow

Available water capacity: 10.7 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Lonigan

Position on landscape: Convex slopes

Typical profile:

0 to 11 inches—grayish brown very fine sandy loam

11 to 16 inches—light brownish gray very gravelly loam
 16 to 33 inches—very pale brown and white very gravelly loam
 33 inches—weathered tuff

Depth class: Moderately deep

Drainage class: Well drained

Permeability: Moderately rapid

Available water capacity: 4.2 inches

Restriction to rooting depth: Weathered tuff at a depth of 20 to 40 inches

Runoff: Medium

Hazard of erosion: By water—severe

Minor Components

- Broadhead soils on concave slopes (10 percent)
- Calpac soils on concave slopes (5 percent)
- Copenhagen soils on convex ridges (5 percent)

Use and Management

Major uses: Nonirrigated cropland, and rangeland

Major management factors: Growing season, permeability in some areas, available water capacity in some areas, water erosion, and slope

Nonirrigated cropland

Suitable crop: Barley

General management considerations:

- The short growing season limits the choice of crops.
- Minimize the risk of erosion and increase the water intake rate by chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Rangeland

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by water erosion and slope.
- Use of equipment is limited by slope.

Interpretive Groups

Land capability classification: 4e, nonirrigated

Ecological site: Manila—Loamy, 16- to 22-inch precipitation zone; Lonigan—Ashy Loam, 13- to 16-inch precipitation zone

77—Manila-Obnot complex, 4 to 12 percent slopes

Composition

*Manila and similar soils—*50 percent

*Obnot and similar soils—*25 percent

*Minor components—*25 percent

Setting

Landform: Hills and fan remnants

Elevation: 4,900 to 6,500 feet

Climatic data (mean annual):

- Precipitation—about 17 inches
- Air temperature—about 43 degrees F
- Frost-free period—70 to 95 days

Characteristics of Manila

Position on landscape: Convex and slightly concave toeslopes

Typical profile:

- 0 to 5 inches—dark grayish brown silt loam
- 5 to 45 inches—grayish brown, yellowish brown, and pale brown silty clay loam and silty clay
- 45 to 60 inches—pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Slow

Available water capacity: 10.7 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—moderate

Characteristics of Obnot

Position on landscape: Convex slopes

Typical profile:

- 0 to 5 inches—dark grayish brown cobbly silty clay loam
- 5 to 34 inches—dark grayish brown, brown, and light brown silty clay and clay loam
- 34 to 60 inches—pink cobbly clay loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Very slow

Available water capacity: 10.7 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—moderate

Minor Components

- Yago soils on steep slopes and in depressions (10 percent)
- Broadhead soils on concave slopes (5 percent)
- Hondoho soils on convex ridges (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (5 percent)

Use and Management

Major uses: Nonirrigated cropland, and rangeland

Major management factors: Growing season, permeability, rock fragments on the surface in some areas, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- Rock fragments on the surface in some areas make seedbed preparation difficult.
- The short growing season limits the choice of crops.
- Minimize the risk of erosion and increase the water intake rate by constructing terraces, chiseling stubble fields on the contour or across the slope in fall,

maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Rangeland

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management consideration:

- The limitations for use as rangeland are minimal if proper grazing management is used.

Interpretive Groups

Land capability classification: Manila—3e, nonirrigated; Obnot—6s, nonirrigated

Ecological site: Loamy, 16- to 22-inch precipitation zone

78—Manila-Yago complex, 4 to 12 percent slopes

Composition

Manila and similar soils—45 percent

Yago and similar soils—40 percent

Minor components—15 percent

Setting

Landform: Fan remnants (fig. 7)

Elevation: 4,900 to 6,500 feet

Climatic data (mean annual):

Precipitation—about 18 inches

Air temperature—about 43 degrees F

Frost-free period—70 to 90 days

Characteristics of Manila

Position on landscape: Convex and slightly concave slopes

Typical profile:

0 to 5 inches—brown silt loam

5 to 45 inches—brown and light brown silty clay loam and silty clay

45 to 60 inches—pink silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Slow

Available water capacity: 10.7 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—moderate

Characteristics of Yago

Position on landscape: Convex slopes

Typical profile:

0 to 10 inches—dark brown very stony silty clay loam

10 to 40 inches—strong brown and reddish yellow very cobbly clay loam

40 to 60 inches—reddish yellow very cobbly silty clay loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Slow

Available water capacity: 7.8 inches

Potential rooting depth: 60 inches or more



Figure 7.—Typical area of Manila-Yago complex, 4 to 12 percent slopes, in foreground. Ridgecrest-Hymas association, 30 to 60 percent slopes, under sagebrush in center. Oxford Mountain is in background.

Runoff: High

Hazard of erosion: By water—moderate

Minor Components

- Broadhead soils on concave slopes (5 percent)
- Hades soils on ridges and concave slopes (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (5 percent)

Use and Management

Major uses: Nonirrigated cropland, and rangeland

Major management factors: Growing season, permeability, rock fragments on the surface in some areas, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Rock fragments on the surface in some areas make seedbed preparation difficult.
- Minimize the risk of erosion and increase the water intake rate by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, rotating crops, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Rangeland

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Use of equipment is limited by the rock fragments on the surface in some areas.

Interpretive Groups

Land capability classification: Manila—3e, nonirrigated; Yago—6e, nonirrigated

Ecological site: Manila—Loamy, 16- to 22-inch precipitation zone; Yago—Stony Loam, 16- to 22-inch precipitation zone

79—Manila-Yago complex, 12 to 30 percent slopes***Composition***

Manila and similar soils—45 percent

Yago and similar soils—35 percent

Minor components—20 percent

Setting

Landform: Fan remnants

Elevation: 4,900 to 6,500 feet

Climatic data (mean annual):

Precipitation—about 18 inches

Air temperature—about 43 degrees F

Frost-free period—70 to 90 days

Characteristics of Manila

Position on landscape: Convex and slightly concave slopes

Typical profile:

0 to 5 inches—brown silt loam

5 to 45 inches—brown and light brown silty clay loam and silty clay

45 to 60 inches—pink silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Slow

Available water capacity: 10.7 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Yago

Position on landscape: Convex slopes

Typical profile:

0 to 10 inches—dark brown very stony silty clay loam

10 to 40 inches—strong brown and reddish yellow very cobbly clay loam

40 to 60 inches—reddish yellow very cobbly silty clay loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Slow

Available water capacity: 7.8 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Minor Components

- Broadhead soils on concave slopes (10 percent)
- Hades soils on ridges and concave slopes (5 percent)
- Lizard soils on steep slopes (5 percent)

Use and Management

Major uses: Nonirrigated cropland, and rangeland

Major management factors: Growing season, permeability, rock fragments on the surface in some areas, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Rock fragments on the surface in some areas make seedbed preparation difficult.
- Minimize the risk of erosion and increase the water intake rate by chiseling stubble fields on the contour or across the slope in fall, rotating crops, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Rangeland

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by the rock fragments on the surface in some areas and water erosion.
- Use of equipment is limited by the rock fragments on the surface in some areas.

Interpretive Groups

Land capability classification: Manila—4e, nonirrigated; Yago—6e, nonirrigated

Ecological site: Manila—Loamy, 16- to 22-inch precipitation zone; Yago—Stony Loam, 16- to 22-inch precipitation zone

80—Mellor-Freedom complex, 0 to 2 percent slopes

Composition

*Mellor and similar soils—*50 percent

*Freedom and similar soils—*35 percent

*Minor components—*15 percent

Setting

Landform: Lake terraces

Elevation: 4,300 to 4,600 feet

Climatic data (mean annual):

Precipitation—about 10 inches

Air temperature—about 47 degrees F

Frost-free period—100 to 110 days

Characteristics of Mellor

Position on landscape: Smooth slopes

Typical profile:

0 to 4 inches—pale brown silt loam

4 to 16 inches—pale brown and light gray silty clay loam

16 to 60 inches—light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Slow

Available water capacity: 7.3 inches

Potential rooting depth: 60 inches or more

Runoff: Negligible

Hazard of erosion: By water—none or slight; by wind—moderate

Characteristics of Freedom

Position on landscape: Smooth slopes

Typical profile:

0 to 13 inches—light brownish gray silt loam

13 to 34 inches—light gray silt loam

34 to 60 inches—light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 10.5 inches

Potential rooting depth: 60 inches or more

Runoff: Negligible

Hazard of erosion: By water—none or slight; by wind—moderate

Minor Components

- Bayhook soils on convex summits (10 percent)
- Ecur soils on terrace shoulders (5 percent)

Use and Management

Major uses: Irrigated cropland and hayland, and rangeland

Major management factors: Permeability in some areas, depth to carbonates, salinity, sodicity, and wind erosion

Irrigated cropland

Suitable crop: Barley

General management considerations:

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Excess salts limit the production of crops.
- An unfavorable calcium-to-magnesium ratio limits the growth of many plants.
- Minimize the risk of erosion and increase the water intake rate by subsoiling, maintaining crop residue on the soil surface, planting crops in narrow strips at right angles to the prevailing wind, and limiting the number of tillage operations.

Irrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Rangeland

Dominant vegetation in natural potential plant community: Mellor—shadscale saltbush

and bottlebrush squirreltail; Freedom—basin big sagebrush and bluebunch wheatgrass

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Seeding of adapted species to improve the range is limited by salinity, sodicity, and wind erosion.
- Production is limited mainly by low precipitation during the growing season, salinity, and sodicity.

Interpretive Groups

Land capability classification: Mellor—4s, irrigated, and 6s, nonirrigated; Freedom—3s, irrigated, and 6s, nonirrigated

Ecological site: Mellor—Alkali Flats, 8- to 12-inch precipitation zone; Freedom—Loamy, 8- to 11-inch precipitation zone

81—Neeley silt loam, 0 to 4 percent slopes

Composition

Neeley and similar soils—90 percent

Minor components—10 percent

Setting

Landform: Lake terraces and fan remnants

Elevation: 4,800 to 5,100 feet

Climatic data (mean annual):

Precipitation—about 12 inches

Air temperature—about 48 degrees F

Frost-free period—100 to 120 days

Characteristics of Neeley

Typical profile:

0 to 7 inches—grayish brown and brown silt loam

7 to 14 inches—pale brown silt loam

14 to 65 inches—light gray and pale yellow silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 13 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—slight

Minor Components

- Darkbull soils on convex summits (5 percent)
- Pyrat soils on convex summits (5 percent)

Use and Management

Major uses: Irrigated and nonirrigated cropland, hayland, and pastureland, and rangeland

Major management factors: Amount of precipitation and time of year it is received (winter and early in spring) and depth to carbonates

Irrigated and nonirrigated cropland*Suitable crops:* Wheat and barley*General management considerations:*

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- Because of the limited precipitation, this unit is not suited to continuous cropping unless it is irrigated.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.

Irrigated and nonirrigated hayland and pastureland*Suitable crops:* Alfalfa hay and pasture*General management considerations:*

- To maintain the quality of meadows and to produce good yields of hay and forage, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.
- Fencing, livestock watering facilities, and a planned grazing system are needed in areas used for pasture.

Rangeland*Dominant vegetation in natural potential plant community:* Basin big sagebrush and bluebunch wheatgrass*General management considerations:*

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Production is limited mainly by the low precipitation during the growing season.

Interpretive Groups*Land capability classification:* 2e, irrigated, and 4c, nonirrigated*Ecological site:* Loamy, 11- to 13-inch precipitation zone**82—Northwater-Povey-Pavohroo association, 30 to 60 percent slopes*****Composition****Northwater and similar soils—35 percent**Povey and similar soils—30 percent**Pavohroo and similar soils—15 percent**Minor components—20 percent****Setting****Landform:* Mountains*Elevation:* 5,000 to 7,700 feet*Climatic data (mean annual):*

Precipitation—about 22 inches

Air temperature—about 40 degrees F

Frost-free period—40 to 70 days

Characteristics of Northwater*Position on landscape:* Slightly concave, north-facing slopes*Typical profile:*

0 to 2 inches—slightly decomposed plant material

2 to 20 inches—dark grayish brown and grayish brown gravelly silt loam

20 to 31 inches—dark grayish brown very gravelly silt loam

31 to 37 inches—light yellowish brown very gravelly loam

37 to 62 inches—light yellowish brown very gravelly clay loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 8.5 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Povey

Position on landscape: South- and east-facing slopes

Typical profile:

0 to 5 inches—dark grayish brown gravelly loam

5 to 20 inches—grayish brown and brown very cobbly loam

20 to 35 inches—yellowish brown very gravelly sandy loam

35 to 60 inches—brown extremely gravelly sandy loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 6.4 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Pavohroo

Position on landscape: Concave slopes

Typical profile:

0 to 1 inch—slightly decomposed plant material

1 to 7 inches—dark brown gravelly silt loam

7 to 16 inches—brown silt loam

16 to 39 inches—brown and light yellowish brown gravelly silt loam

39 to 61 inches—light yellowish brown gravelly clay loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 10.3 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Minor Components

- Calpac soils on toeslopes (5 percent)
- Ireland soils on ridges (5 percent)
- Rock outcrop on shoulders (5 percent)
- Soils that have slopes of less than 30 percent (5 percent)

Use and Management

Major use: Rangeland

Major management factors: Available water capacity in some areas, water erosion, and slope

Dominant vegetation in natural potential plant community: Northwater—Douglas fir and mountain snowberry; Povey—mountain big sagebrush and bluebunch wheatgrass; Pavohroo—quaking aspen

General management considerations:

- Seeding of adapted species to improve the range is limited by water erosion and slope.
- Uniform distribution of grazing is difficult because of the slope or the lack of permanent water developments, or both.
- Production is limited mainly by the restricted available water capacity in some areas.
- Use of equipment is limited by slope.

Interpretive Groups

Land capability classification: 7e, nonirrigated

Ecological site: Northwater—Mountain Loamy, 22+-inch precipitation zone; Povey—Steep Slope, 16- to 22-inch precipitation zone; Pavohroo—Moist Mountain Loam, 20+-inch precipitation zone

83—Parehat silt loam, 0 to 2 percent slopes

Composition

*Parehat and similar soils—*90 percent

*Minor components—*10 percent

Setting

Landform: Low stream terraces

Elevation: 4,300 to 4,500 feet

Climatic data (mean annual):

Precipitation—about 11 inches

Air temperature—about 48 degrees F

Frost-free period—100 to 115 days

Characteristics of Parehat

Typical profile:

0 to 6 inches—grayish brown silt loam

6 to 52 inches—brown, light brownish gray, and grayish brown silt loam

52 to 64 inches—light brownish gray loam

Depth class: Very deep

Drainage class: Somewhat poorly drained

Permeability: Moderate

Available water capacity: 11.6 inches

Potential rooting depth: Water-tolerant plants—60 inches or more; non-water-tolerant plants—24 to 48 inches

Runoff: Negligible

Hazard of erosion: By water—none or slight

Depth to seasonal high water table: 24 to 36 inches in April through July

Frequency of flooding: Occasional

Minor Components

- Goosenawt soils in depressions (10 percent)

Use and Management

Major use: Irrigated pastureland

Major management factors: Salinity, wetness, and flooding

Suitable crops: Water-tolerant grasses

General management considerations:

- To maintain the quality of meadows and to produce good yields of forage, conservation practices such as using an irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.
- Fencing, livestock watering facilities, and a planned grazing system are needed in areas used for pasture.
- The seasonal high water table provides supplemental moisture for plants.
- Seed only pasture plants that tolerate periodic inundation and seasonal wetness.

Interpretive Groups

Land capability classification: 5w, irrigated and nonirrigated

84—Parleys silt loam, 0 to 2 percent slopes

Composition

*Parleys and similar soils—*80 percent

*Minor components—*20 percent

Setting

Landform: Lake terraces

Elevation: 4,400 to 5,200 feet

Climatic data (mean annual):

Precipitation—about 14 inches

Air temperature—about 48 degrees F

Frost-free period—100 to 120 days

Characteristics of Parleys

Typical profile:

0 to 5 inches—grayish brown silt loam

5 to 26 inches—grayish brown and brown silty clay loam

26 to 64 inches—white and light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 12.8 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—none or slight

Minor Components

- Arbone soils on higher lying terrace slopes (5 percent)
- Fridlo soils on lower lying terrace slopes (5 percent)
- Kearns soils on convex slopes (2 percent)
- Raldrige soils on convex slopes (3 percent)
- Neeley soils on convex slopes (5 percent)

Use and Management

Major uses: Irrigated and nonirrigated cropland and hayland

Major management factors: Few limitations

Irrigated and nonirrigated cropland

Suitable crops: Wheat and barley

General management consideration:

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.

Irrigated and nonirrigated hayland*Suitable crop:* Alfalfa hay*General management considerations:*

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Interpretive Groups*Land capability classification:* 2c, irrigated, and 3c, nonirrigated**85—Parleys silt loam, 2 to 4 percent slopes*****Composition****Parleys and similar soils*—85 percent*Minor components*—15 percent***Setting****Landform:* Lake terraces*Elevation:* 4,400 to 5,200 feet*Climatic data (mean annual):*

Precipitation—about 14 inches

Air temperature—about 48 degrees F

Frost-free period—100 to 120 days

Characteristics of Parleys*Typical profile:*

0 to 5 inches—grayish brown silt loam

5 to 26 inches—grayish brown and brown silty clay loam

26 to 64 inches—white and light gray silt loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderately slow*Available water capacity:* 12.8 inches*Potential rooting depth:* 60 inches or more*Runoff:* Low*Hazard of erosion:* By water—slight***Minor Components***

- Kearns soils on convex terraces (10 percent)
- Raldrige soils on concave terraces (5 percent)

Use and Management*Major uses:* Irrigated and nonirrigated cropland and hayland*Major management factors:* Few limitations**Irrigated and nonirrigated cropland***Suitable crops:* Wheat and barley

General management consideration:

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.

Irrigated and nonirrigated hayland*Suitable crop:* Alfalfa hay*General management considerations:*

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Interpretive Groups*Land capability classification:* 2e, irrigated, and 3e, nonirrigated**86—Parleys-Welby complex, 2 to 12 percent slopes*****Composition****Parleys and similar soils*—50 percent*Welby and similar soils*—35 percent*Minor components*—15 percent***Setting****Landform:* Lake terraces*Elevation:* 4,400 to 5,200 feet*Climatic data (mean annual):*

Precipitation—about 14 inches

Air temperature—about 48 degrees F

Frost-free period—100 to 130 days

Characteristics of Parleys*Position on landscape:* Slightly convex or smooth slopes*Typical profile:*

0 to 5 inches—grayish brown silt loam

5 to 26 inches—grayish brown and brown silty clay loam

26 to 64 inches—white and light gray silt loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderately slow*Available water capacity:* 12.8 inches*Potential rooting depth:* 60 inches or more*Runoff:* Medium*Hazard of erosion:* By water—moderate***Characteristics of Welby****Position on landscape:* Smooth slopes*Typical profile:*

0 to 11 inches—brown silt loam

11 to 36 inches—very pale brown silt loam

36 to 60 inches—very pale brown fine sandy loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderate

Available water capacity: 10.5 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Lostine soils in depressions (5 percent)
- Soils that have slopes of more than 12 percent (5 percent)
- Wheelon soils on convex shoulders (5 percent)

Use and Management

Major uses: Nonirrigated cropland and hayland, and rangeland

Major management factors: Depth to carbonates in some areas, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by constructing terraces, maintaining crop residue on the soil surface, chiseling stubble fields on the contour or across the slope in fall, and limiting the number of tillage operations.

Nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as managing nutrients and maintaining plant vigor are needed.

Rangeland

Dominant vegetation in natural potential plant community: Basin big sagebrush and bluebunch wheatgrass

General management consideration:

- The limitations for use as rangeland are minimal if proper grazing management is used.

Interpretive Groups

Land capability classification: 3e, nonirrigated

Ecological site: Loamy, 12- to 16-inch precipitation zone

87—Parleys-Wheelon complex, 4 to 12 percent slopes

Composition

*Parleys and similar soils—*60 percent

*Wheelon and similar soils—*15 percent

*Minor components—*25 percent

Setting

Landform: Lake terraces

Elevation: 4,400 to 5,200 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 48 degrees F

Frost-free period—100 to 120 days

Characteristics of Parleys

Position on landscape: Slightly convex or smooth slopes

Slope range: 4 to 8 percent

Typical profile:

0 to 5 inches—grayish brown silt loam

5 to 26 inches—grayish brown and brown silty clay loam

26 to 64 inches—white and light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 12.8 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Wheelon

Position on landscape: Convex slopes

Slope: 6 to 12 percent

Typical profile:

0 to 8 inches—pale brown silt loam

8 to 45 inches—very pale brown silt loam and silty clay loam

45 to 60 inches—very pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Kearns soils on concave slopes (10 percent)
- Collinston soils on concave slopes (5 percent)
- Hillfield soils on convex slopes (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (5 percent)

Use and Management

Major uses: Irrigated and nonirrigated cropland and hayland

Major management factors: Depth to carbonates in some areas, water erosion, and slope in some areas

Irrigated and nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Irrigated and nonirrigated hayland*Suitable crop:* Alfalfa hay*General management considerations:*

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.
- Fencing, livestock watering facilities, and a planned grazing system are needed in areas used for pasture.

Interpretive Groups

Land capability classification: Parleys—3e, irrigated and nonirrigated; Wheelon—4e, irrigated, and 3e, nonirrigated

88—Pavohroo-Povey association, 30 to 60 percent slopes***Composition****Pavohroo and similar soils*—45 percent*Povey and similar soils*—30 percent*Minor components*—25 percent***Setting****Landform:* Mountains*Elevation:* 5,000 to 7,700 feet*Climatic data (mean annual):*

Precipitation—about 20 inches

Air temperature—about 40 degrees F

Frost-free period—40 to 70 days

Characteristics of Pavohroo*Position on landscape:* North-facing, concave slopes*Typical profile:*

0 to 1 inch—slightly decomposed plant material

1 to 7 inches—dark brown gravelly silt loam

7 to 16 inches—brown silt loam

16 to 39 inches—brown and light yellowish brown gravelly silt loam

39 to 61 inches—light yellowish brown gravelly clay loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderately slow*Available water capacity:* 10.3 inches*Potential rooting depth:* 60 inches or more*Runoff:* Very high*Hazard of erosion:* By water—severe***Characteristics of Povey****Position on landscape:* South- and east-facing slopes*Typical profile:*

0 to 5 inches—dark grayish brown gravelly loam

5 to 20 inches—grayish brown and brown very cobbly loam

20 to 35 inches—yellowish brown very gravelly sandy loam

35 to 60 inches—brown extremely gravelly sandy loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 6.4 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Minor Components

- Ireland soils on east-facing slopes (10 percent)
- Northwater soils on north-facing slopes (10 percent)
- Calpac soils on northeast-facing slopes (5 percent)

Use and Management

Major use: Rangeland

Major management factors: Available water capacity in some areas, water erosion, and slope

Dominant vegetation in natural potential plant community: Pavohroo—quaking aspen; Povey—mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by water erosion and slope.
- Uniform distribution of grazing is difficult because of the slope or the lack of permanent water developments, or both.
- Production is limited mainly by the restricted available water capacity in some areas.
- Use of equipment is limited by slope.

Interpretive Groups

Land capability classification: 7e, nonirrigated

Ecological site: Pavohroo—Moist Mountain Loam, 20+-inch precipitation zone; Povey—Steep Slope, 16- to 22-inch precipitation zone

89—Pavohroo-Stines-Lonigan association, 10 to 40 percent slopes

Composition

*Pavohroo and similar soils—*45 percent

*Stines and similar soils—*30 percent

*Lonigan and similar soils—*20 percent

*Minor components—*5 percent

Setting

Landform: Mountains

Elevation: 4,800 to 7,700 feet

Climatic data (mean annual):

Precipitation—about 18 inches

Air temperature—about 41 degrees F

Frost-free period—40 to 95 days

Characteristics of Pavohroo

Position on landscape: North-facing slopes

Typical profile:

- 0 to 1 inch—slightly decomposed plant material
- 1 to 7 inches—dark brown gravelly silt loam
- 7 to 16 inches—brown silt loam
- 16 to 39 inches—brown and light yellowish brown gravelly silt loam
- 39 to 61 inches—light yellowish brown gravelly clay loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderately slow*Available water capacity:* 10.3 inches*Potential rooting depth:* 60 inches or more*Runoff:* High*Hazard of erosion:* By water—severe**Characteristics of Stines***Position on landscape:* East-facing, convex and slightly concave slopes*Typical profile:*

- 0 to 13 inches—dark grayish brown gravelly loam
- 13 to 24 inches—pale brown very gravelly loam
- 24 to 44 inches—light gray very gravelly sandy loam
- 44 to 60 inches—light gray extremely cobbly loamy sand

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderately rapid*Available water capacity:* 4.6 inches*Potential rooting depth:* 60 inches or more*Runoff:* Medium*Hazard of erosion:* By water—severe**Characteristics of Lonigan***Position on landscape:* Slightly concave slopes*Typical profile:*

- 0 to 11 inches—grayish brown very fine sandy loam
- 11 to 16 inches—light brownish gray very gravelly loam
- 16 to 33 inches—very pale brown and white very gravelly loam
- 33 inches—weathered tuff

Depth class: Moderately deep*Drainage class:* Well drained*Permeability:* Moderately rapid*Available water capacity:* 4.5 inches*Restriction to rooting depth:* Weathered tuff at a depth of 20 to 40 inches*Runoff:* Medium*Hazard of erosion:* By water—severe**Minor Components**

- Small areas of Rock outcrop on shoulders (3 percent)
- Hutchley soils on ridges (2 percent)

Use and Management*Major use:* Rangeland*Major management factors:* Available water capacity in some areas, water erosion, and slope

Dominant vegetation in natural potential plant community: Pavohroo—quaking aspen;

Stines and Lonigan—mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by water erosion and slope.
- After seeding, defer grazing until young plants are well established.
- Use of equipment is limited by slope.

Interpretive Groups

Land capability classification: Pavohroo and Lonigan—6e, nonirrigated; Stines—4e, nonirrigated

Ecological site: Pavohroo—Moist Mountain Loam, 20+-inch precipitation zone; Stines—Loamy, 16- to 22-inch precipitation zone; Lonigan—Ashy Loam, 13- to 16-inch precipitation zone

90—Pits, gravel

Pits are open excavations from which the soil and part of the underlying sand, gravel, and cobbles have been removed. This unit generally is on terraces created by the ancient Lake Bonneville flood. The underlying material supports very little, if any, vegetation. The land capability classification is 8.

91—Povey-Hades-Hondoho association, 10 to 50 percent slopes

Composition

Povey and similar soils—35 percent

Hades and similar soils—30 percent

Hondoho and similar soils—25 percent

Minor components—10 percent

Setting

Landform: Mountains

Elevation: 4,900 to 7,700 feet

Climatic data (mean annual):

Precipitation—about 18 inches

Air temperature—about 40 degrees F

Frost-free period—60 to 100 days

Characteristics of Povey

Position on landscape: North- and east-facing, concave slopes

Typical profile:

0 to 5 inches—dark grayish brown gravelly loam

5 to 20 inches—grayish brown and brown very cobbly loam

20 to 35 inches—yellowish brown very gravelly sandy loam

35 to 60 inches—brown extremely gravelly sandy loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 6.4 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—moderate or severe

Characteristics of Hades

Position on landscape: Concave slopes

Typical profile:

0 to 20 inches—dark grayish brown and grayish brown silt loam

20 to 42 inches—brown silty clay loam

42 to 60 inches—yellowish brown gravelly silty clay loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 10.8 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—moderate or severe

Characteristics of Hondoho

Position on landscape: West-facing, convex slopes

Typical profile:

0 to 14 inches—grayish brown gravelly silt loam

14 to 28 inches—pale brown very cobbly loam

28 to 60 inches—very pale brown very cobbly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 5.8 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—moderate or severe

Minor Components

- Hymas soils in convex areas on backslopes (3 percent)
- Northwater soils on north- and east-facing slopes (3 percent)
- Calpac soils on smooth slopes (2 percent)
- Rock outcrop on ridges (2 percent)

Use and Management

Major use: Rangeland

Major management factors: Water erosion and slope

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by water erosion and slope.
- Use of equipment is limited by slope.
- After seeding, defer grazing until young plants are well established.

Interpretive Groups

Land capability classification: 6e, nonirrigated

Ecological site: Povey and Hades—Loamy, 16- to 22-inch precipitation zone;

Hondoho—Steep Slope, 16- to 22-inch precipitation zone

92—Povey-Ireland-Calpac association, 30 to 70 percent slopes

Composition

Povey and similar soils—45 percent
Ireland and similar soils—25 percent
Calpac and similar soils—15 percent
Minor components—15 percent

Setting

Landform: Mountains and ridges
Elevation: 5,200 to 7,700 feet
Climatic data (mean annual):
 Precipitation—about 20 inches
 Air temperature—about 41 degrees F
 Frost-free period—60 to 90 days

Characteristics of Povey

Position on landscape: North- and east-facing slopes
Typical profile:
 0 to 5 inches—dark grayish brown gravelly loam
 5 to 20 inches—grayish brown and brown very cobbly loam
 20 to 35 inches—yellowish brown very gravelly sandy loam
 35 to 60 inches—brown extremely gravelly sandy loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Available water capacity: 6.4 inches
Potential rooting depth: 60 inches or more
Runoff: Very high
Hazard of erosion: By water—severe

Characteristics of Ireland

Position on landscape: Convex, south-facing slopes
Typical profile:
 0 to 8 inches—grayish brown very gravelly silt loam
 8 to 28 inches—grayish brown and brown extremely cobbly silt loam
 28 inches—highly fractured limestone
Depth class: Moderately deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: 2 inches
Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches
Runoff: Very high
Hazard of erosion: By water—severe

Characteristics of Calpac

Position on landscape: Concave slopes
Typical profile:
 0 to 8 inches—dark brown gravelly silt loam
 8 to 15 inches—dark brown very gravelly silt loam

15 to 23 inches—brown extremely cobbly silt loam

23 to 60 inches—brown extremely cobbly silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 4.9 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Minor Components

- Hymas soils on ridges and convex slopes (5 percent)
- Pavohroo soils on concave slopes (5 percent)
- Ridgecrest soils on northeast-facing slopes (3 percent)
- Northwater soils on concave, northeast-facing slopes (2 percent)

Use and Management

Major use: Rangeland

Major management factors: Rock fragments on the surface, available water capacity, water erosion, and slope

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by the rock fragments on the surface, water erosion, and slope.
- Uniform distribution of grazing is difficult because of the slope or lack of permanent water developments, or both.
- Production is limited mainly by the restricted available water capacity.
- Use of equipment is limited by slope.

Interpretive Groups

Land capability classification: 7e, nonirrigated

Ecological site: Steep Slope, 16- to 22-inch precipitation zone

93—Povey-Pavohroo association, 30 to 60 percent slopes

Composition

*Povey and similar soils—*45 percent

*Pavohroo and similar soils—*30 percent

*Minor components—*25 percent

Setting

Landform: Mountains

Elevation: 5,000 to 7,700 feet

Climatic data (mean annual):

Precipitation—about 20 inches

Air temperature—about 40 degrees F

Frost-free period—40 to 70 days

Characteristics of Povey

Position on landscape: East-facing slopes

Typical profile:

- 0 to 5 inches—dark grayish brown gravelly loam
- 5 to 20 inches—grayish brown and brown very cobbly loam
- 20 to 35 inches—yellowish brown very gravelly sandy loam
- 35 to 60 inches—brown extremely gravelly sandy loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderately slow*Available water capacity:* 6.4 inches*Potential rooting depth:* 60 inches or more*Runoff:* Very high*Hazard of erosion:* By water—severe**Characteristics of Pavohroo***Position on landscape:* North- and east-facing slopes*Typical profile:*

- 0 to 1 inch—slightly decomposed plant material
- 1 to 7 inches—dark brown gravelly silt loam
- 7 to 16 inches—brown silt loam
- 16 to 39 inches—brown and light yellowish brown gravelly silt loam
- 39 to 61 inches—light yellowish brown gravelly clay loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderately slow*Available water capacity:* 10.3 inches*Potential rooting depth:* 60 inches or more*Runoff:* Very high*Hazard of erosion:* By water—severe**Minor Components**

- Hymas soils on concave, north-facing slopes at high elevations (10 percent)
- Ireland soils on convex, east- and southeast-facing slopes (5 percent)
- Soils that have slopes of less than 30 percent (5 percent)
- Hondoho soils on lower lying slopes (3 percent)
- Rock outcrop on ridges (2 percent)

Use and Management*Major use:* Rangeland (fig. 8)*Major management factors:* Water erosion and slope*Dominant vegetation in natural potential plant community:* Povey—mountain big sagebrush and bluebunch wheatgrass; Pavohroo—quaking aspen*General management considerations:*

- Seeding of adapted species to improve the range is limited by water erosion and slope.
- Uniform distribution of grazing is difficult because of the slope or the lack of permanent water developments, or both.
- Use of equipment is limited by slope.

Interpretive Groups*Land capability classification:* 7e, nonirrigated*Ecological site:* Povey—Steep Slope, 16- to 22-inch precipitation zone; Pavohroo—Moist Mountain Loam, 20+-inch precipitation zone



Figure 8.—Typical area of Povey-Pavohroo association, 30 to 60 percent slopes. The Elkhorn Mountains are in background.

94—Povirt silty clay loam, 0 to 2 percent slopes

Composition

Povirt and similar soils—85 percent

Minor components—15 percent

Setting

Landform: Relict lakebeds

Elevation: 4,900 to 5,200 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 43 degrees F

Frost-free season—80 to 100 days

Characteristics of Povirt

Typical profile:

0 to 10 inches—light brownish gray silty clay loam

10 to 60 inches—light brownish gray and light gray silty clay

Depth class: Very deep

Drainage class: Poorly drained

Permeability: Impermeable

Available water capacity: 9.8 inches

Potential rooting depth: Water-tolerant plants—60 inches or more; non-water-tolerant plants—0 to 18 inches

Runoff: Negligible

Hazard of erosion: By water—none or slight; by wind—moderate

Depth to seasonal perched water table: 12 inches above the surface to a depth of 18 inches below the surface in April through June

Frequency of ponding: Frequent; areas of this soil in Pocatello Valley are covered with water as a result of snowmelt in closed basins

Frequency of flooding: Rare

Minor Components

- Bothwell soils on slightly higher lying lake terraces (10 percent)
- Elevator soils on low lake terraces (5 percent)

Use and Management

Major use: Nonirrigated cropland

Major management factors: Growing season, permeability, wetness, ponding, and wind erosion

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Seasonal ponding limits the production and harvesting of crops.
- The seasonal high water table provides supplemental moisture for plants.
- Minimize the risk of erosion by maintaining crop residue on the soil surface, limiting the number of tillage operations, and planting crops in narrow strips at right angles to the prevailing wind.

Interpretive Groups

Land capability classification: 3w, nonirrigated

95—Raldrige gravelly loam, 4 to 12 percent slopes

Composition

*Raldrige and similar soils—*75 percent

*Minor components—*25 percent

Setting

Landform: Hills

Elevation: 4,600 to 5,100 feet

Climatic data (mean annual):

Precipitation—about 14 inches

Air temperature—about 40 degrees F

Frost-free period—120 to 130 days

Characteristics of Raldrige

Typical profile:

0 to 3 inches—dark grayish brown gravelly loam

3 to 14 inches—dark grayish brown gravelly silty clay loam

14 to 22 inches—grayish brown very gravelly clay loam

22 to 60 inches—light gray and very pale brown very gravelly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 5.6 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- DeJarnet soils on smooth to concave terraces (5 percent)
- Rock outcrop on shoulders (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (5 percent)
- Soils that are on midslopes and have more than 35 percent gravel in the subsoil (10 percent)

Use and Management

Major uses: Rangeland and nonirrigated cropland

Major management factors: Rock fragments on the surface, water erosion, and slope

Rangeland

Dominant vegetation in natural potential plant community: Basin big sagebrush and bluebunch wheatgrass

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Production is limited mainly by the low precipitation during the growing season.

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- Because of the limited precipitation, this unit is not suited to continuous cropping.
- Rock fragments on the surface make seedbed preparation difficult.
- Minimize the risk of erosion, maintain tilth, and increase the water intake rate by constructing terraces, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Interpretive Groups

Land capability classification: 3e, nonirrigated

Ecological site: Loamy, 11- to 13-inch precipitation zone

96—Rexburg silt loam, 1 to 4 percent slopes

Composition

*Rexburg and similar soils—*85 percent

*Minor components—*15 percent

Setting

Landform: Fan remnants

Elevation: 5,100 to 5,900 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free period—80 to 100 days

Characteristics of Rexburg

Typical profile:

0 to 14 inches—grayish brown silt loam

14 to 22 inches—brown silt loam

22 to 60 inches—light gray and very pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—slight

Minor Components

- Arbone soils on convex slopes (1 percent)
- Lanoak soils on concave slopes and in depressions (10 percent)
- Thatcher soils on smooth to concave slopes (2 percent)
- Toefoot soils on smooth slopes (2 percent)

Use and Management

Major uses: Irrigated and nonirrigated cropland and hayland

Major management factors: Growing season and depth to carbonates

Irrigated and nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.

Irrigated and nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: 3e, irrigated, and 3c, nonirrigated

97—Rexburg-Arbone-Ririe complex, 4 to 12 percent slopes

Composition

Rexburg and similar soils—50 percent

Arbone and similar soils—25 percent

Ririe and similar soils—15 percent

Minor components—10 percent

Setting

Landform: Fan remnants (fig. 9)

Elevation: 5,000 to 5,900 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free period—70 to 100 days



Figure 9.—Typical area of Rexburg silt loam in an area of Rexburg-Arbone-Ririe complex, 4 to 12 percent slopes. Rexburg-Arbone-Ririe complex, 12 to 25 percent slopes, is in background.

Characteristics of Rexburg

Position on landscape: Convex or smooth slopes

Typical profile:

0 to 14 inches—grayish brown silt loam

14 to 22 inches—brown silt loam

22 to 60 inches—light gray and very pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Arbone

Position on landscape: Convex slopes

Typical profile:

0 to 15 inches—grayish brown and brown silt loam

15 to 60 inches—brown gravelly silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 8.7 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Ririe

Position on landscape: Convex slopes

Typical profile:

0 to 14 inches—grayish brown and brown silt loam

14 to 63 inches—very pale brown and light yellowish brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12.6 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Hondoho soils on convex ridges (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (3 percent)
- Soils that have an average of more than 18 percent clay in the subsoil and are on toeslopes in Arbon Valley (2 percent)

Use and Management

Major uses: Nonirrigated cropland and hayland, and rangeland

Major management factors: Growing season, depth to carbonates, water erosion, and slope in some areas

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Reduce the risk of water erosion by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as managing nutrients and maintaining plant vigor are needed.

Rangeland

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management consideration:

- The limitations for use as rangeland are minimal if proper grazing management is used.

Interpretive Groups

Land capability classification: 3e, nonirrigated

Ecological site: Loamy, 13- to 16-inch precipitation zone

98—Rexburg-Arbone-Ririe complex, 12 to 25 percent slopes

Composition

Rexburg and similar soils—40 percent

Arbone and similar soils—35 percent

Ririe and similar soils—15 percent

Minor components—10 percent

Setting

Landform: Fan remnants

Elevation: 5,000 to 5,900 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free period—70 to 100 days

Characteristics of Rexburg

Position on landscape: Convex slopes

Typical profile:

0 to 14 inches—grayish brown silt loam

14 to 22 inches—brown silt loam

22 to 60 inches—light gray and very pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Characteristics of Arbone

Position on landscape: Convex slopes

Typical profile:

0 to 15 inches—grayish brown and brown gravelly silt loam

15 to 60 inches—brown gravelly silt loam and very pale brown gravelly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 8.7 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Characteristics of Ririe

Position on landscape: Smooth or slightly convex slopes

Typical profile:

0 to 14 inches—grayish brown silt loam

14 to 63 inches—very pale brown and light yellowish brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12.6 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Minor Components

- Hondoho soils on convex ridges (5 percent)
- Soils that have slopes of less than 12 percent or more than 25 percent (5 percent)

Use and Management

Major uses: Nonirrigated cropland, and rangeland

Major management factors: Growing season, depth to carbonates, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Rangeland

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Seeding of adapted species to improve the range is limited by water erosion.

Interpretive Groups

Land capability classification: 4e, nonirrigated

Ecological site: Loamy, 13- to 16-inch precipitation zone

99—Rexburg-Iphil-Watercanyon complex, 12 to 30 percent slopes

Composition

*Rexburg and similar soils—*30 percent

*Iphil and similar soils—*25 percent

*Watercanyon and similar soils—*25 percent

*Minor components—*20 percent

Setting

Landform: Fan remnants and hills

Elevation: 5,000 to 5,900 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free period—80 to 115 days

Characteristics of Rexburg

Position on landscape: Slightly concave or smooth slopes

Typical profile:

0 to 14 inches—grayish brown silt loam

14 to 22 inches—brown silt loam

22 to 60 inches—light gray and very pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—severe

Characteristics of Iphil

Position on landscape: Convex or smooth slopes

Typical profile:

0 to 10 inches—brown silt loam

10 to 36 inches—light gray and very pale brown silt loam

36 to 60 inches—very pale brown loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—severe

Characteristics of Watercanyon

Position on landscape: Convex slopes

Typical profile:

0 to 5 inches—pale brown silt loam

5 to 33 inches—pale brown and very pale brown silt loam

33 to 62 inches—very pale brown very fine sandy loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 8.9 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—severe

Minor Components

- Kucera soils on concave slopes (10 percent)
- Ririe soils on smooth or convex slopes (5 percent)
- Soils that have slopes of less than 12 percent or more than 30 percent (5 percent)

Use and Management

Major use: Nonirrigated cropland

Major management factors: Depth to carbonates, water erosion, and slope

Suitable crops: Wheat and barley

General management considerations:

- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Interpretive Groups

Land capability classification: 6e, nonirrigated

100—Rexburg-Lanoak complex, 4 to 12 percent slopes***Composition***

Rexburg and similar soils—55 percent

Lanoak and similar soils—35 percent

Minor components—10 percent

Setting

Landform: Hills and fan remnants

Elevation: 5,100 to 6,000 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free period—80 to 100 days

Characteristics of Rexburg

Position on landscape: Convex slopes

Typical profile:

0 to 14 inches—grayish brown silt loam

14 to 22 inches—light brownish gray and pale brown silt loam

22 to 60 inches—light yellowish brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Lanoak

Position on landscape: Concave slopes and depressions

Typical profile:

0 to 30 inches—grayish brown and brown silt loam

30 to 60 inches—pale brown and light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Buist soils on ridges (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (3 percent)
- Iphil soils on convex slopes (2 percent)

Use and Management

Major uses: Nonirrigated cropland and hayland

Major management factors: Growing season, depth to carbonates in some areas, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by constructing terraces, limiting the number of tillage operations, and maintaining crop residue on the soil surface.

Nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as managing nutrients and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: 3e, nonirrigated

101—Rexburg-Lanoak complex, 12 to 25 percent slopes

Composition

*Rexburg and similar soils—*55 percent

*Lanoak and similar soils—*35 percent

*Minor components—*10 percent

Setting

Landform: Hills and fan remnants

Elevation: 5,100 to 6,000 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free period—80 to 100 days

Characteristics of Rexburg

Position on landscape: Smooth or slightly convex slopes

Typical profile:

0 to 14 inches—grayish brown silt loam

14 to 22 inches—light brownish gray and pale brown silt loam

22 to 60 inches—light yellowish brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Characteristics of Lanoak

Position on landscape: Smooth or slightly convex slopes

Typical profile:

0 to 30 inches—grayish brown and brown silt loam

30 to 60 inches—pale brown and light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Minor Components

- Soils that are on smooth or convex slopes and have a hardpan at a depth of 10 to 30 inches (5 percent)
- Soils that have slopes of less than 12 percent or more than 25 percent (3 percent)
- Arbone soils on ridges and south-facing slopes (2 percent)

Use and Management

Major uses: Nonirrigated cropland and hayland

Major management factors: Growing season, depth to carbonates in some areas, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by chiseling stubble fields on the contour or across the slope in fall and by maintaining crop residue on the soil surface.

Nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as managing nutrients and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: 4e, nonirrigated

102—Rexburg-Lanoak-Watercanyon complex, 4 to 12 percent slopes

Composition

*Rexburg and similar soils—*35 percent

*Lanoak and similar soils—*25 percent

Watercanyon and similar soils—20 percent

Minor components—20 percent

Setting

Landform: Fan remnants and hills

Elevation: 5,000 to 6,000 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free period—80 to 115 days

Characteristics of Rexburg

Position on landscape: Smooth or slightly convex slopes

Typical profile:

0 to 14 inches—grayish brown silt loam

14 to 22 inches—brown silt loam

22 to 60 inches—light gray and very pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Lanoak

Position on landscape: Concave slopes

Typical profile:

0 to 30 inches—grayish brown and brown silt loam

30 to 60 inches—pale brown and light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Watercanyon

Position on landscape: Convex slopes

Typical profile:

0 to 5 inches—pale brown silt loam

5 to 33 inches—pale brown and very pale brown silt loam

33 to 62 inches—very pale brown very fine sandy loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 8.9 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Soils that are on smooth or convex slopes in the hills east of Dairy Creek and are underlain by consolidated tuff (10 percent)
- Arbone soils on convex slopes (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (3 percent)
- Small areas of Rock outcrop on shoulders (2 percent)

Use and Management

Major use: Nonirrigated cropland

Major management factors: Depth to carbonates in some areas, water erosion, and slope

Suitable crops: Wheat and barley

General management considerations:

- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Interpretive Groups

Land capability classification: 3e, nonirrigated

103—Rexburg-Ririe-Kucera complex, 2 to 8 percent slopes

Composition

Rexburg and similar soils—50 percent

Ririe and similar soils—20 percent

Kucera and similar soils—15 percent

Minor components—15 percent

Setting

Landform: Fan remnants

Elevation: 4,400 to 5,900 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 44 degrees F

Frost-free period—70 to 100 days

Characteristics of Rexburg

Position on landscape: Smooth or slightly convex slopes

Typical profile:

0 to 14 inches—grayish brown silt loam

14 to 22 inches—brown silt loam

22 to 60 inches—light gray and very pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Ririe

Position on landscape: Slightly convex or smooth slopes

Typical profile:

0 to 14 inches—grayish brown silt loam

14 to 60 inches—light gray and very pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Kucera

Position on landscape: Concave slopes

Typical profile:

0 to 22 inches—dark grayish brown and brown silt loam

22 to 42 inches—pale brown silt loam

42 to 60 inches—very pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Cedarhill soils on concave slopes in depressions (5 percent)
- Soils that are in broad depressions and average more than 15 percent gravel in the subsoil (5 percent)
- Soils that have slopes of less than 2 percent or more than 8 percent (3 percent)
- Watercanyon soils on south-facing, convex slopes (2 percent)

Use and Management

Major uses: Nonirrigated and irrigated cropland (fig. 10) and hayland

Major management factors: Growing season, depth to carbonates in some areas, and water erosion

Nonirrigated and irrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, and limiting the number of tillage operations.



Figure 10.—Nonirrigated grain on Ririe silt loam in an area of Rexburg-Ririe-Kucera complex, 2 to 8 percent slopes.

Nonirrigated and irrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: Rexburg—3e, irrigated and nonirrigated; Ririe and Kucera—4e, irrigated, and 3e, nonirrigated

104—Rexburg-Thatcher-Ririe complex, 12 to 30 percent slopes

Composition

Rexburg and similar soils—40 percent

Thatcher and similar soils—25 percent

Ririe and similar soils—20 percent

Minor components—15 percent

Setting

Landform: Fan remnants

Elevation: 4,700 to 5,900 feet

Climatic data (mean annual):

Precipitation—about 14 inches

Air temperature—about 43 degrees F

Frost-free period—70 to 100 days

Characteristics of Rexburg

Position on landscape: Smooth or slightly convex slopes

Typical profile:

0 to 14 inches—grayish brown silt loam

14 to 22 inches—grayish brown and brown silt loam

22 to 60 inches—light gray and very pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—severe

Characteristics of Thatcher

Position on landscape: Concave slopes

Typical profile:

0 to 7 inches—grayish brown silt loam

7 to 35 inches—yellowish brown and light yellowish brown silty clay loam

35 to 60 inches—light yellowish brown and pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 9.5 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—severe

Characteristics of Ririe

Position on landscape: Slightly convex or smooth slopes

Typical profile:

0 to 14 inches—brown silt loam

14 to 60 inches—pale brown and light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium to very high

Hazard of erosion: By water—severe

Minor Components

- Arbone soils on steep slopes and in depressions (5 percent)
- Soils that have slopes of less than 12 percent or more than 30 percent (5 percent)
- Lanoak soils on concave slopes (3 percent)
- Hondoho soils on concave slopes (2 percent)

Use and Management

Major use: Nonirrigated cropland

Major management factors: Growing season, depth to carbonates, water erosion, and slope

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by chiseling stubble fields on the contour or across the slope in fall and by maintaining crop residue on the soil surface.

Interpretive Groups

Land capability classification: 6e, nonirrigated

105—Rexburg-Watercanyon-Lanoak complex, 12 to 20 percent slopes

Composition

Rexburg and similar soils—35 percent

Watercanyon and similar soils—30 percent

Lanoak and similar soils—20 percent

Minor components—15 percent

Setting

Landform: Fan remnants and hills

Elevation: 5,000 to 6,000 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free period—80 to 115 days

Characteristics of Rexburg

Position on landscape: Smooth or slightly convex slopes

Typical profile:

0 to 14 inches—grayish brown silt loam

14 to 22 inches—brown silt loam

22 to 60 inches—light gray and very pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Characteristics of Watercanyon

Position on landscape: Convex slopes

Typical profile:

0 to 5 inches—pale brown silt loam

5 to 33 inches—pale brown and very pale brown silt loam

33 to 62 inches—very pale brown very fine sandy loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 8.9 inches
Potential rooting depth: 60 inches or more
Runoff: Medium
Hazard of erosion: By water—severe

Characteristics of Lanoak

Position on landscape: Concave slopes
Typical profile:
 0 to 30 inches—grayish brown and brown silt loam
 30 to 60 inches—pale brown and light gray silt loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: 12 inches
Potential rooting depth: 60 inches or more
Runoff: Medium
Hazard of erosion: By water—severe

Minor Components

- Soils that are on smooth to convex slopes in the hills east of Dairy Creek and are underlain by consolidated tuff (5 percent)
- Hondoho soils on concave slopes (3 percent)
- Arbone soils on slightly convex slopes (2 percent)
- Rock outcrop on convex shoulders (2 percent)
- Soils that have slopes of less than 12 percent or more than 20 percent (2 percent)
- Cedarhill soils near depressions (1 percent)

Use and Management

Major use: Nonirrigated cropland
Major management factors: Depth to carbonates, water erosion, and slope
Suitable crops: Wheat and barley
General management considerations:

- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by chiseling stubble fields on the contour or across the slope in fall and by returning crop residue to the soil.

Interpretive Groups

Land capability classification: 4e, nonirrigated

106—Ridgecrest-Hondoho complex, 30 to 60 percent slopes

Composition

*Ridgecrest and similar soils—*45 percent
*Hondoho and similar soils—*35 percent
*Minor components—*20 percent

Setting

Landform: Mountains
Elevation: 5,200 to 7,000 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 44 degrees F

Frost-free period—70 to 100 days

Characteristics of Ridgecrest

Position on landscape: Convex slopes

Typical profile:

0 to 9 inches—grayish brown very gravelly silt loam

9 to 31 inches—grayish brown, yellowish brown, and light yellowish brown very cobbly silt loam and very cobbly loam

31 to 35 inches—very pale brown, calcareous extremely cobbly sandy loam

35 inches—highly fractured limestone

Depth class: Moderately deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 3.6 inches

Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Hondoho

Position on landscape: Smooth or slightly concave slopes

Typical profile:

0 to 14 inches—grayish brown gravelly silt loam

14 to 28 inches—pale brown very cobbly silt loam

28 to 60 inches—very pale brown very cobbly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 5.8 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Minor Components

- Hades soils on convex slopes (5 percent)
- Hymas soils on ridges (5 percent)
- Small areas of Rock outcrop on shoulders (5 percent)
- Soils that have slopes of less than 30 percent (3 percent)
- Calpac soils on concave slopes (2 percent)

Use and Management

Major use: Rangeland

Major management factors: Rock fragments on the surface, available water capacity in some areas, water erosion, and slope

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by rock fragments on the surface, water erosion, and slope.
- The use of forage by livestock is limited by the irregular distribution of desirable forage and the lack of permanent water developments.

- Production is limited mainly by the restricted available water capacity in some areas.
- Use of equipment is limited by slope.

Interpretive Groups

Land capability classification: 7e, nonirrigated

Ecological site: Steep Slope, 16- to 22-inch precipitation zone

107—Ridgecrest-Hondoho-Hymas association, 30 to 60 percent slopes

Composition

Ridgecrest and similar soils—35 percent

Hondoho and similar soils—30 percent

Hymas and similar soils—15 percent

Minor components—20 percent

Setting

Landform: Mountains and ridges

Elevation: 5,000 to 7,500 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 44 degrees F

Frost-free period—70 to 100 days

Characteristics of Ridgecrest

Position on landscape: North- and east-facing slopes

Typical profile:

0 to 9 inches—grayish brown very gravelly silt loam

9 to 31 inches—grayish brown, yellowish brown, and light yellowish brown very cobbly silt loam and very cobbly loam

31 to 35 inches—very pale brown extremely cobbly sandy loam

35 inches—highly fractured limestone

Depth class: Moderately deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 3.6 inches

Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Hondoho

Position on landscape: South- and west-facing slopes

Typical profile:

0 to 14 inches—grayish brown gravelly silt loam

14 to 28 inches—pale brown very cobbly loam

28 to 60 inches—very pale brown very cobbly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 5.8 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Hymas

Position on landscape: Convex slopes

Typical profile:

- 0 to 2 inches—grayish brown very cobbly loam
- 2 to 7 inches—brown very cobbly silt loam
- 7 to 11 inches—pale brown extremely cobbly loam
- 11 inches—highly fractured limestone

Depth class: Shallow

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 1.2 inches

Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches

Runoff: Very high

Hazard of erosion: By water—severe

Minor Components

- Calpac soils on concave slopes (5 percent)
- Lizdale soils on toeslopes (5 percent)
- Pavohroo soils on convex slopes (5 percent)
- Ireland soils on ridges (3 percent)
- Small areas of Rock outcrop on shoulders (2 percent)

Use and Management

Major use: Rangeland

Major management factors: Depth to bedrock in some areas, rock fragments on the surface, available water capacity in some areas, water erosion, and slope

Dominant vegetation in natural potential plant community: Ridgecrest and Hondoho—mountain big sagebrush and bluebunch wheatgrass; Hymas—low sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by the depth to bedrock in some areas, available water capacity in some areas, rock fragments on the surface, water erosion, and slope.
- The use of forage by livestock is limited by the irregular distribution of desirable forage and the lack of permanent water developments.
- Production is limited mainly by the depth to bedrock and restricted available water capacity in some areas.
- Use of equipment is limited by the rock fragments on the surface and slope.

Interpretive Groups

Land capability classification: Ridgecrest and Hondoho—7e, nonirrigated; Hymas—7s, nonirrigated

Ecological site: Ridgecrest and Hondoho—Steep Slope, 16- to 22-inch precipitation zone; Hymas—Shallow Stony, 12- to 16-inch precipitation zone

108—Ridgecrest-Hondoho-Lizdale association, 30 to 60 percent slopes

Composition

Ridgecrest and similar soils—35 percent

Hondoho and similar soils—30 percent

Lizdale and similar soils—20 percent

Minor components—15 percent

Setting

Landform: Mountains

Elevation: 4,800 to 7,000 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 43 degrees F

Frost-free period—about 85 days

Characteristics of Ridgecrest

Position on landscape: North- and east-facing slopes

Typical profile:

0 to 9 inches—grayish brown very gravelly silt loam

9 to 31 inches—grayish brown, yellowish brown, and light yellowish brown
very cobbly silt loam and very cobbly loam

31 to 35 inches—very pale brown extremely cobbly sandy loam

35 inches—highly fractured limestone

Depth class: Moderately deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 3.6 inches

Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Hondoho

Position on landscape: South- and west-facing slopes

Typical profile:

0 to 14 inches—grayish brown gravelly silt loam

14 to 28 inches—pale brown very cobbly loam

28 to 60 inches—very pale brown very cobbly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 5.8 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Lizdale

Position on landscape: Slightly concave slopes

Typical profile:

0 to 7 inches—dark grayish brown very gravelly silt loam

7 to 36 inches—brown very gravelly loam and pink very gravelly sandy loam

36 to 60 inches—light brown extremely gravelly sandy loam and extremely
gravelly loamy sand

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 4.9 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Minor Components

- Hades soils on concave slopes (5 percent)
- Hymas soils on convex slopes near shoulders (5 percent)
- Small areas of Rock outcrop on shoulders (5 percent)

Use and Management

Major use: Rangeland

Major management factors: Rock fragments on the surface, available water capacity in some areas, water erosion, and slope

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by rock fragments on the surface, water erosion, and slope.
- The use of forage by livestock is limited by the irregular distribution of desirable forage and the lack of permanent water developments.
- Production is limited mainly by the restricted available water capacity in some areas.
- Use of equipment is limited by the rock fragments on the surface and slope.

Interpretive Groups

Land capability classification: 7e, nonirrigated

Ecological site: Steep Slope, 16- to 22-inch precipitation zone

109—Ridgecrest-Hymas association, 30 to 60 percent slopes

Composition

*Ridgecrest and similar soils—*45 percent

*Hymas and similar soils—*30 percent

*Minor components—*25 percent

Setting

Landform: Mountains and ridges

Elevation: 5,000 to 7,500 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 43 degrees F

Frost-free period—70 to 90 days

Characteristics of Ridgecrest

Position on landscape: Convex slopes of mountains

Typical profile:

0 to 9 inches—grayish brown very gravelly silt loam

9 to 31 inches—grayish brown, yellowish brown, and light yellowish brown very cobbly silt loam and very cobbly loam

31 to 35 inches—very pale brown extremely cobbly sandy loam

35 inches—highly fractured limestone

Depth class: Moderately deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 3.6 inches

Restriction to rooting depth: Bedrock at a depth of 20 to 40 inches

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Hymas

Position on landscape: Convex slopes of ridges

Typical profile:

0 to 2 inches—grayish brown very cobbly loam

2 to 7 inches—brown very cobbly silt loam

7 to 11 inches—pale brown extremely cobbly loam

11 inches—highly fractured limestone

Depth class: Shallow

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 1.2 inches

Restriction to rooting depth: Bedrock at a depth of 10 to 20 inches

Runoff: Very high

Hazard of erosion: By water—severe

Minor Components

- Arbone soils on convex slopes (10 percent)
- Hondoho soils on concave slopes (10 percent)
- Lizardale soils on toeslopes (3 percent)
- Small areas of Rock outcrop on shoulders (2 percent)

Use and Management

Major use: Rangeland (fig. 11)

Major management factors: Depth to bedrock in some areas, rock fragments on the surface, available water capacity, water erosion, and slope



Figure 11.—Typical area of Ridgecrest-Hymas association, 30 to 60 percent slopes. Hymas very cobbly loam is left of the draw, and Ridgecrest very gravelly silt loam is right of the draw.

Dominant vegetation in natural potential plant community: Ridgecrest—mountain big sagebrush and bluebunch wheatgrass; Hymas—Utah juniper, mountain big sagebrush, and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by the depth to bedrock in some areas, rock fragments on the surface, water erosion, and slope.
- The use of forage by livestock is limited by the irregular distribution of desirable forage and the lack of permanent water developments.
- Production is limited mainly by the depth to bedrock in some areas and the restricted available water capacity.
- Use of equipment is limited by the rock fragments on the surface and slope.

Interpretive Groups

Land capability classification: Ridgecrest—7e, nonirrigated; Hymas—7s, nonirrigated

Ecological site: Ridgecrest—Steep Slope, 16- to 22-inch precipitation zone; Hymas—Shallow Juniper Breaks, 13- to 16-inch precipitation zone

110—Ririe-Buist complex, 4 to 12 percent slopes

Composition

Ririe and similar soils—50 percent

Buist and similar soils—25 percent

Minor components—25 percent

Setting

Landform: Fan remnants

Elevation: 5,000 to 6,000 feet

Climatic data (mean annual):

Precipitation—about 14 inches

Air temperature—about 43 degrees F

Frost-free period—70 to 95 days

Characteristics of Ririe

Position on landscape: Slightly concave slopes

Typical profile:

0 to 14 inches—brown silt loam

14 to 60 inches—pale brown and light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Buist

Position on landscape: Convex slopes

Typical profile:

0 to 15 inches—brown gravelly silt loam

15 to 28 inches—brown very gravelly loam

28 to 60 inches—very pale brown extremely gravelly fine sandy loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 5.9 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Soils that are on convex slopes and average more than 18 percent clay in the subsoil (10 percent)
- Kucera soils on east- and north-facing, concave slopes and backslopes (5 percent)
- Soils that have a cemented horizon at a depth of 20 to 40 inches (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (3 percent)
- Iphil soils on east-facing, smooth slopes (2 percent)

Use and Management

Major uses: Nonirrigated cropland, and rangeland

Major management factors: Growing season, depth to carbonates, rock fragments on the surface in some areas, available water capacity in some areas, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Rock fragments on the surface in some areas make seedbed preparation difficult.
- Minimize the risk of erosion and conserve moisture by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, and maintaining crop residue on the soil surface.

Rangeland

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management consideration:

- The limitations for use as rangeland are minimal if proper grazing management is used.

Interpretive Groups

Land capability classification: 3e, nonirrigated

Ecological site: Loamy, 13- to 16-inch precipitation zone

111—Ririe-Cedarhill complex, 4 to 12 percent slopes

Composition

*Ririe and similar soils—*50 percent

*Cedarhill and similar soils—*25 percent

*Minor components—*25 percent

Setting

Landform: Fan remnants

Elevation: 5,000 to 6,500 feet

Climatic data (mean annual):

- Precipitation—about 15 inches
- Air temperature—about 43 degrees F
- Frost-free period—70 to 100 days

Characteristics of Ririe

Position on landscape: Slightly concave or smooth slopes

Typical profile:

- 0 to 14 inches—grayish brown and brown silt loam
- 14 to 60 inches—very pale brown and light yellowish brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Cedarhill

Position on landscape: Convex slopes

Typical profile:

- 0 to 7 inches—grayish brown gravelly silt loam
- 7 to 12 inches—grayish brown gravelly loam
- 12 to 27 inches—light brownish gray very gravelly loam
- 27 to 60 inches—very pale brown extremely cobbly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 4.9 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Lostine soils on east-facing, slightly concave slopes (10 percent)
- Justesen soils on concave slopes (5 percent)
- Kucera soils on east- and north-facing, concave slopes (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (5 percent)

Use and Management

Major use: Nonirrigated cropland

Major management factors: Growing season, depth to carbonates, rock fragments on the surface in some areas, available water capacity in some areas, water erosion, and slope

Suitable crop: Wheat

General management considerations:

- The short growing season limits the choice of crops.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Rock fragments on the surface in some areas make seedbed preparation difficult.
- Minimize the risk of erosion and conserve moisture by constructing terraces,

chiseling stubble fields on the contour or across the slope in fall, limiting the number of tillage operations, and maintaining crop residue on the soil surface.

Interpretive Groups

Land capability classification: 3e, nonirrigated

112—Ririe-Cedarhill complex, 12 to 20 percent slopes

Composition

Ririe and similar soils—50 percent

Cedarhill and similar soils—25 percent

Minor components—25 percent

Setting

Landform: Fan remnants

Elevation: 5,000 to 6,500 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free period—70 to 100 days

Characteristics of Ririe

Position on landscape: Slightly concave or smooth slopes

Typical profile:

0 to 14 inches—brown silt loam

14 to 60 inches—pale brown and light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Characteristics of Cedarhill

Position on landscape: Convex slopes

Typical profile:

0 to 7 inches—grayish brown gravelly silt loam

7 to 12 inches—grayish brown gravelly loam

12 to 27 inches—light brownish gray very gravelly loam

27 to 60 inches—very pale brown extremely cobbly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 4.9 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Minor Components

- Justesen soils on concave slopes (10 percent)
- Lostine soils on east-facing, slightly concave slopes (10 percent)
- Soils that have slopes of less than 12 percent or more than 20 percent (3 percent)
- Kucera soils on east- and north-facing, concave slopes (2 percent)

Use and Management

Major use: Nonirrigated cropland

Major management factors: Growing season, depth to carbonates, rock fragments on the surface in some areas, available water capacity in some areas, water erosion, and slope

Suitable crop: Wheat

General management considerations:

- The short growing season limits the choice of crops.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Rock fragments on the surface in some areas make seedbed preparation difficult.
- Minimize the risk of erosion and conserve moisture by chiseling stubble fields on the contour or across the slope in fall, limiting the number of tillage operations, and maintaining crop residue on the soil surface.

Interpretive Groups

Land capability classification: 4e, nonirrigated

113—Ririe-Hondoho complex, 12 to 20 percent slopes

Composition

*Ririe and similar soils—*50 percent

*Hondoho and similar soils—*25 percent

*Minor components—*25 percent

Setting

Landform: Fan remnants

Elevation: 5,000 to 6,700 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free period—70 to 100 days

Characteristics of Ririe

Position on landscape: Slightly concave or smooth slopes

Typical profile:

0 to 14 inches—brown silt loam

14 to 60 inches—pale brown and light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Characteristics of Hondoho

Position on landscape: Convex slopes

Typical profile:

0 to 14 inches—grayish brown gravelly silt loam

14 to 28 inches—pale brown very cobbly loam

28 to 60 inches—very pale brown very cobbly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 5.8 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Minor Components

- Arbone soils on east- and south-facing, convex slopes (10 percent)
- Iphil soils on east-facing, convex slopes (5 percent)
- Soils that have a cemented layer at a depth of 20 to 40 inches (5 percent)
- Soils that have slopes of less than 12 percent or more than 20 percent (3 percent)
- Kucera soils on east- and north-facing, concave slopes (2 percent)

Use and Management

Major uses: Nonirrigated cropland and hayland

Major management factors: Growing season, depth to carbonates, rock fragments on the surface in some areas, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Rock fragments on the surface in some areas make seedbed preparation difficult.
- Minimize the risk of erosion by chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as managing nutrients and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: Ririe—4e, nonirrigated; Hondoho—3e, nonirrigated

114—Ririe-Iphil-Kucera complex, 2 to 8 percent slopes

Composition

Ririe and similar soils—40 percent

Iphil and similar soils—25 percent

Kucera and similar soils—20 percent

Minor components—15 percent

Setting

Landform: Fan remnants

Elevation: 4,400 to 5,900 feet

Climatic data (mean annual):

Precipitation—about 16 inches
Air temperature—about 44 degrees F
Frost-free period—70 to 100 days

Characteristics of Ririe

Slope: 2 to 6 percent

Position on landscape: Slightly concave or smooth slopes

Typical profile:

0 to 14 inches—brown silt loam

14 to 60 inches—pale brown and light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Iphil

Slope: 2 to 8 percent

Position on landscape: Convex slopes

Typical profile:

0 to 10 inches—brown silt loam

10 to 36 inches—light gray and very pale brown silt loam

36 to 60 inches—very pale brown loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Kucera

Slope: 2 to 8 percent

Position on landscape: Slightly concave slopes

Typical profile:

0 to 22 inches—dark grayish brown and brown silt loam

22 to 42 inches—pale brown silt loam

42 to 60 inches—very pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Arbone soils in broad depressions (10 percent)
- Soils that have slopes of less than 2 percent or more than 8 percent (3 percent)
- Cedarhill soils on concave slopes (2 percent)

Use and Management

Major uses: Nonirrigated cropland and hayland

Major management factors: Growing season, depth to carbonates in some areas, and water erosion

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, and maintaining crop residue on the soil surface.

Nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as managing nutrients and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: 3e, nonirrigated

115—Ririe-Iphil-Rexburg complex, 4 to 12 percent slopes

Composition

*Ririe and similar soils—*30 percent

*Iphil and similar soils—*25 percent

*Rexburg and similar soils—*25 percent

*Minor components—*20 percent

Setting

Landform: Fan remnants

Elevation: 5,000 to 5,900 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free period—70 to 100 days

Characteristics of Ririe

Position on landscape: Slightly concave or smooth slopes

Typical profile:

0 to 14 inches—brown silt loam

14 to 60 inches—pale brown and light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Iphil

Position on landscape: Convex slopes

Typical profile:

0 to 10 inches—brown silt loam

10 to 36 inches—light gray and very pale brown silt loam

36 to 60 inches—very pale brown loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Rexburg

Position on landscape: Concave slopes

Typical profile:

0 to 14 inches—grayish brown silt loam

14 to 22 inches—brown silt loam

22 to 62 inches—brown, light brownish gray, and yellowish brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Cedarhill soils on concave slopes (10 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (5 percent)
- Watercanyon soils on south-facing, convex slopes (5 percent)

Use and Management

Major uses: Nonirrigated cropland and hayland

Major management factors: Growing season, depth to carbonates, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Minimize the risk of erosion by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, and limiting the number of tillage operations.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.

Nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay,

conservation practices such as managing nutrients and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: 3e, nonirrigated

116—Ririe-Rexburg complex, 4 to 12 percent slopes

Composition

Ririe and similar soils—45 percent

Rexburg and similar soils—40 percent

Minor components—15 percent

Setting

Landform: Fan remnants

Elevation: 5,000 to 5,400 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free period—70 to 100 days

Characteristics of Ririe

Position on landscape: Smooth or convex slopes

Typical profile:

0 to 14 inches—grayish brown and brown silt loam

14 to 63 inches—very pale brown and light yellowish brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12.6 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Rexburg

Position on landscape: Concave or smooth slopes

Typical profile:

0 to 14 inches—grayish brown silt loam

14 to 22 inches—brown silt loam

22 to 60 inches—light gray and very pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Kucera soils on east-, west-, and north-facing, concave slopes (5 percent)
- Lostine soils on east- and north-facing, smooth or slightly concave slopes (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (3 percent)

- Cedarhill soils on east- and south-facing, convex slopes (2 percent)

Use and Management

Major uses: Irrigated and nonirrigated cropland and hayland

Major management factors: Growing season, depth to carbonates, water erosion, and slope

Irrigated and nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Irrigated and nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: 4e, irrigated, and 3e, nonirrigated

117—Ririe-Watercanyon complex, 4 to 12 percent slopes

Composition

*Ririe and similar soils—*50 percent

*Watercanyon and similar soils—*25 percent

*Minor components—*25 percent

Setting

Landform: Fan remnants and hills

Elevation: 5,000 to 5,900 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 44 degrees F

Frost-free period—70 to 115 days

Characteristics of Ririe

Position on landscape: Smooth or slightly concave slopes

Typical profile:

0 to 14 inches—grayish brown and brown silt loam

14 to 63 inches—very pale brown and light yellowish brown silt loam

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: 12.6 inches
Potential rooting depth: 60 inches or more
Runoff: Medium
Hazard of erosion: By water—moderate

Characteristics of Watercanyon

Position on landscape: Convex slopes
Typical profile:
 0 to 5 inches—pale brown silt loam
 5 to 33 inches—pale brown and very pale brown silt loam
 33 to 62 inches—very pale brown very fine sandy loam

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: 8.9 inches
Potential rooting depth: 60 inches or more
Runoff: Medium
Hazard of erosion: By water—moderate

Minor Components

- Calcareous soils that are on smooth to convex slopes of the hills east of Dairy Creek and are underlain by consolidated tuff (10 percent)
- Arbone soils on south-facing slopes and in depressions (5 percent)
- Rexburg soils on convex slopes (5 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (5 percent)

Use and Management

Major uses: Nonirrigated cropland, and rangeland
Major management factors: Growing season, depth to carbonates, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Rangeland

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management consideration:

- The limitations for use as rangeland are minimal if proper grazing management is used.

Interpretive Groups

Land capability classification: 3e, nonirrigated

Ecological site: Ririe—Loamy, 13- to 16-inch precipitation zone; Watercanyon—Shallow Loamy, 13- to 16-inch precipitation zone

118—Ririe-Watercanyon complex, 12 to 30 percent slopes

Composition

Ririe and similar soils—45 percent

Watercanyon and similar soils—35 percent

Minor components—20 percent

Setting

Landform: Fan remnants and hills

Elevation: 5,000 to 5,900 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 44 degrees F

Frost-free period—70 to 115 days

Characteristics of Ririe

Position on landscape: Smooth or slightly concave slopes

Typical profile:

0 to 14 inches—grayish brown and brown silt loam

14 to 63 inches—very pale brown and light yellowish brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 12.6 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—severe

Characteristics of Watercanyon

Position on landscape: Convex slopes

Typical profile:

0 to 5 inches—pale brown silt loam

5 to 33 inches—pale brown and very pale brown silt loam

33 to 62 inches—very pale brown very fine sandy loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 8.9 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—severe

Minor Components

- Calcareous soils that are on smooth or convex slopes of the hills east of Dairy Creek and are underlain by consolidated tuff (10 percent)
- Arbore soils on south-facing slopes and in depressions (5 percent)

- Soils that have slopes of less than 12 percent or more than 30 percent (3 percent)
- Rexburg soils on convex slopes (2 percent)

Use and Management

Major uses: Nonirrigated cropland, and rangeland

Major management factors: Growing season, depth to carbonates, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by chiseling stubble fields on the contour or across the slope in fall and by maintaining crop residue on the soil surface.

Rangeland

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management consideration:

- Seeding of adapted species to improve the range is limited by water erosion.

Interpretive Groups

Land capability classification: 6e, nonirrigated

Ecological site: Ririe—Loamy, 13- to 16-inch precipitation zone; Watercanyon—Shallow Loamy, 13- to 16-inch precipitation zone

119—Samaria silt loam, 0 to 4 percent slopes

Composition

*Samaria and similar soils—*90 percent

*Minor components—*10 percent

Setting

Landform: Lake terraces

Elevation: 4,500 to 5,300 feet

Climatic data (mean annual):

Precipitation—about 14 inches

Air temperature—about 48 degrees F

Frost-free period—100 to 120 days

Characteristics of Samaria

Typical profile:

0 to 5 inches—grayish brown silt loam

5 to 16 inches—brown gravelly silt loam

16 to 27 inches—light brownish gray and very pale brown gravelly loam

27 to 64 inches—light gray and very pale brown gravelly sandy loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 7.7 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—slight

Minor Components

- Ecur soils on convex slopes (5 percent)
- Soils that are on concave slopes and are noncalcareous (5 percent)

Use and Management

Major uses: Irrigated and nonirrigated cropland and hayland, and rangeland

Major management factor: Depth to carbonates

Irrigated and nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.

Irrigated and nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Rangeland

Dominant vegetation in natural potential plant community: Basin big sagebrush and bluebunch wheatgrass

General management consideration:

- The limitations for use as rangeland are minimal if proper grazing management is used.

Interpretive Groups

Land capability classification: 3c, irrigated and nonirrigated

Ecological site: Loamy, 11- to 13-inch precipitation zone

120—Samaria silt loam, 4 to 8 percent slopes

Composition

*Samaria and similar soils—*90 percent

*Minor components—*10 percent

Setting

Landform: Lake terraces

Elevation: 4,500 to 5,300 feet

Climatic data (mean annual):

Precipitation—about 14 inches

Air temperature—about 48 degrees F

Frost-free period—100 to 120 days

Characteristics of Samaria

Typical profile:

- 0 to 5 inches—grayish brown silt loam
- 5 to 16 inches—brown gravelly silt loam
- 16 to 27 inches—light brownish gray and very pale brown gravelly loam
- 27 to 64 inches—light gray and very pale brown gravelly sandy loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 7.7 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Ecur soils on convex slopes (5 percent)
- Soils that are on concave slopes and are noncalcareous (2 percent)
- Soils that have slopes of less than 4 percent or more than 8 percent (3 percent)

Use and Management

Major uses: Irrigated and nonirrigated cropland and hayland, and rangeland

Major management factors: Depth to carbonates and water erosion

Irrigated and nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, and returning crop residue to the soil.

Irrigated and nonirrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Rangeland

Dominant vegetation in natural potential plant community: Basin big sagebrush and bluebunch wheatgrass

General management consideration:

- The limitations for use as rangeland are minimal if proper grazing management is used.

Interpretive Groups

Land capability classification: 3e, irrigated and nonirrigated

Ecological site: Loamy, 11- to 13-inch precipitation zone

121—Samaria-Pollynot complex, 4 to 12 percent slopes

Composition

Samaria and similar soils—55 percent

Pollynot and similar soils—30 percent

Minor components—15 percent

Setting

Landform: Fan remnants and lake terraces

Elevation: 4,300 to 5,300 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 47 degrees F

Frost-free period—100 to 120 days

Characteristics of Samaria

Position on landscape: Slightly convex or smooth slopes

Typical profile:

0 to 5 inches—grayish brown silt loam

5 to 16 inches—brown gravelly silt loam

16 to 27 inches—light brownish gray and very pale brown gravelly loam

27 to 64 inches—light gray and very pale brown gravelly sandy loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 7.7 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Characteristics of Pollynot

Position on landscape: Slightly convex or smooth slopes

Typical profile:

0 to 7 inches—grayish brown silt loam

7 to 17 inches—grayish brown silt loam

17 to 41 inches—pale brown silt loam and loam

41 to 56 inches—light gray very gravelly sandy loam

56 to 60 inches—light gray extremely gravelly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 9 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Highcreek soils on smooth or very slightly concave slopes (10 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (3 percent)
- Parleys soils on smooth or convex slopes (2 percent)

Use and Management

Major uses: Nonirrigated cropland and hayland, and rangeland

Major management factors: Depth to carbonates, water erosion, and slope

Nonirrigated cropland*Suitable crops:* Wheat and barley*General management considerations:*

- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, and maintaining crop residue on the soil surface.

Nonirrigated hayland*Suitable crop:* Alfalfa hay*General management considerations:*

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as managing nutrients and maintaining plant vigor are needed.

Rangeland*Dominant vegetation in natural potential plant community:* Basin big sagebrush and bluebunch wheatgrass*General management consideration:*

- The limitations for use as rangeland are minimal if proper grazing management is used.

Interpretive Groups*Land capability classification:* 3e, nonirrigated*Ecological site:* Samaria—Loamy, 11- to 13-inch precipitation zone; Pollynnot—Loamy, 12- to 16-inch precipitation zone**122—Samaria-Sterling complex, 4 to 12 percent slopes*****Composition****Samaria and similar soils*—50 percent*Sterling and similar soils*—35 percent*Minor components*—15 percent***Setting****Landform:* Fan remnants*Elevation:* 4,500 to 5,500 feet*Climatic data (mean annual):*

Precipitation—about 14 inches

Air temperature—about 47 degrees F

Frost-free period—100 to 120 days

Characteristics of Samaria*Position on landscape:* Convex slopes*Typical profile:*

0 to 5 inches—grayish brown silt loam

5 to 16 inches—brown gravelly silt loam

16 to 27 inches—light brownish gray and very pale brown gravelly loam

27 to 64 inches—light gray and very pale brown gravelly sandy loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderate

Available water capacity: 7.7 inches
Potential rooting depth: 60 inches or more
Runoff: Medium
Hazard of erosion: By water—moderate

Characteristics of Sterling

Position on landscape: Concave slopes
Typical profile:
 0 to 13 inches—brown very gravelly loam
 13 to 66 inches—pale brown and very pale brown very gravelly loam
Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: 4.9 inches
Potential rooting depth: 60 inches or more
Runoff: Medium
Hazard of erosion: By water—moderate

Minor Components

- Kearns soils on lower fan remnants (10 percent)
- Soils that have slopes of less than 4 percent or more than 12 percent (3 percent)
- Highcreek soils on higher lying fan remnants (2 percent)

Use and Management

Major uses: Rangeland and nonirrigated cropland
Major management factors: Depth to carbonates, rock fragments on the surface in some areas, water erosion, and slope

Rangeland

Dominant vegetation in natural potential plant community: Basin big sagebrush and bluebunch wheatgrass

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Equipment is limited by the rock fragments on the surface in some areas.

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Rock fragments on the surface in some areas make seedbed preparation difficult.
- Minimize the risk of erosion by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, and maintaining crop residue on the soil surface.

Interpretive Groups

Land capability classification: 3e, nonirrigated

Ecological site: Samaria—Loamy, 11- to 13-inch precipitation zone; Sterling—Loamy, 12- to 16-inch precipitation zone

123—Sterling very gravelly loam, 12 to 20 percent slopes

Composition

Sterling and similar soils—80 percent

Minor components—20 percent

Setting

Landform: Fan remnants and hills

Elevation: 4,500 to 5,500 feet

Climatic data (mean annual):

Precipitation—about 13 inches

Air temperature—about 47 degrees F

Frost-free period—100 to 120 days

Characteristics of Sterling

Typical profile:

0 to 13 inches—brown very gravelly loam

13 to 66 inches—pale brown and very pale brown very gravelly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 4.9 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—severe

Minor Components

- Highcreek soils on upper slopes (5 percent)
- Samaria soils on lower slopes (10 percent)
- Soils that have slopes of less than 12 percent or more than 20 percent (5 percent)

Use and Management

Major uses: Rangeland and nonirrigated cropland

Major management factors: Depth to carbonates, rock fragments on the surface, water erosion, and slope

Rangeland

Dominant vegetation in natural potential plant community: Basin big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by the low precipitation during the growing season, rock fragments on the surface, and water erosion.
- After seeding, defer grazing until young plants are well established.
- Production is limited mainly by the low precipitation during the growing season.
- The use of equipment is limited by the rock fragments on the surface.

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- Continuous cropping is not suitable because of the limited precipitation.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.

- Rock fragments on the surface make seedbed preparation difficult.
- Minimize the risk of erosion by chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Interpretive Groups

Land capability classification: 3e, nonirrigated

Ecological site: Loamy, 12- to 16-inch precipitation zone

124—Thatcher silt loam, 4 to 12 percent slopes

Composition

Thatcher and similar soils—85 percent

Minor components—15 percent

Setting

Landform: Fan remnants

Elevation: 4,700 to 5,900 feet

Climatic data (mean annual):

Precipitation—about 14 inches

Air temperature—about 43 degrees F

Frost-free period—80 to 100 days

Characteristics of Thatcher

Typical profile:

0 to 7 inches—grayish brown silt loam

7 to 35 inches—yellowish brown and light yellowish brown silty clay loam

35 to 60 inches—light yellowish brown and pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 9.5 inches

Potential rooting depth: 60 inches or more

Runoff: Medium

Hazard of erosion: By water—moderate

Minor Components

- Broadhead soils in depressions (5 percent)
- Small areas of soils in the Samaria and Cherry Creek areas that have slopes of less than 4 percent (5 percent)
- Soils in depressions that are calcareous to the surface (5 percent)

Use and Management

Major uses: Nonirrigated and irrigated cropland, irrigated hayland, and building site development

Major management factors: Growing season, permeability, water erosion, and slope

Nonirrigated and irrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.

- Minimize the risk of erosion by constructing terraces, returning crop residue to the soil, and limiting the number of tillage operations.

Irrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Building site development

General management considerations:

- Septic tank absorption fields can be expected to function poorly because of the restricted permeability of the soil.
- Absorption lines should be installed below the layer that has restricted permeability.

Interpretive Groups

Land capability classification: 4e, irrigated and nonirrigated

125—Thatcher-Jensen complex, 12 to 30 percent slopes

Composition

*Thatcher and similar soils—*45 percent

*Jensen and similar soils—*35 percent

*Minor components—*20 percent

Setting

Landform: Fan remnants

Elevation: 4,700 to 5,900 feet

Climatic data (mean annual):

Precipitation—about 16 inches

Air temperature—about 43 degrees F

Frost-free period—80 to 100 days

Characteristics of Thatcher

Position on landscape: Convex slopes

Typical profile:

0 to 7 inches—grayish brown silt loam

7 to 35 inches—yellowish brown and light yellowish brown silty clay loam

35 to 60 inches—light yellowish brown and pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 9.5 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—severe

Characteristics of Jensen

Position on landscape: Convex or slightly concave slopes

Typical profile:

0 to 12 inches—grayish brown silt loam

12 to 45 inches—brown and pale brown gravelly silt loam

45 to 60 inches—pale brown very gravelly loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 9.2 inches

Potential rooting depth: 60 inches or more

Runoff: High

Hazard of erosion: By water—severe

Minor Components

- Lostine soils on north-facing slopes (10 percent)
- Hondoho soils on upper slopes (5 percent)
- Soils that have slopes of less than 12 percent or more than 30 percent (5 percent)

Use and Management

Major use: Nonirrigated cropland

Major management factors: Growing season, water erosion, and slope

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Minimize the risk of erosion by chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Interpretive Groups

Land capability classification: Thatcher—6e, nonirrigated; Jensen—4e, nonirrigated

126—Freedom silt loam, 0 to 4 percent slopes

Composition

*Freedom and similar soils—*75 percent

*Minor components—*25 percent

Setting

Landform: Lake terraces

Elevation: 4,300 to 4,600 feet

Climatic data (mean annual):

Precipitation—about 10 inches

Air temperature—about 48 degrees F

Frost-free period—100 to 110 days

Characteristics of Freedom

Typical profile:

0 to 13 inches—light brownish gray silt loam

13 to 34 inches—light gray silt loam

34 to 60 inches—light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 10.5 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—slight; by wind—moderate

Minor Components

- Ecur soils in depressions (5 percent)
- Mellor soils in depressions (10 percent)
- Tickason soils in narrow depressions (10 percent)

Use and Management

Major uses: Irrigated cropland, hayland, and pastureland, and rangeland

Major management factors: Depth to carbonates and wind erosion

Irrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by planting crops in narrow strips at right angles to the prevailing wind, subsoiling, and maintaining crop residue on the soil surface.

Irrigated hayland and pastureland

Suitable crops: Alfalfa hay and pasture

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay and forage, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.
- Fencing, livestock watering facilities, and a planned grazing system are needed in areas used for pasture.

Rangeland

Dominant vegetation in natural potential plant community: Basin big sagebrush and bluebunch wheatgrass

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Seeding of adapted species to improve the range is limited by the low precipitation during the growing season and by wind erosion.
- Production is limited mainly by the low precipitation during the growing season.

Interpretive Groups

Land capability classification: 3s, irrigated, and 6s, nonirrigated

Ecological site: Loamy, 8- to 11-inch precipitation zone

127—Tickason very fine sandy loam, 0 to 2 percent slopes

Composition

*Tickason and similar soils—*80 percent

*Minor components—*20 percent

Setting

Landform: Fan remnants

Elevation: 4,400 to 5,000 feet

Climatic data (mean annual):

Precipitation—about 12 inches

Air temperature—about 48 degrees F

Frost-free period—100 to 130 days

Characteristics of Tickason

Typical profile:

0 to 10 inches—grayish brown very fine sandy loam

10 to 23 inches—pale brown fine sandy loam

23 to 31 inches—very pale brown very fine sandy loam

31 to 38 inches—very pale brown fine sandy loam

38 to 60 inches—very pale brown loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 9.4 inches

Potential rooting depth: 60 inches or more

Runoff: Negligible

Hazard of erosion: By water—none or slight; by wind—moderate

Minor Components

- Ecur soils on terrace shoulders (10 percent)
- Hillfield soils on terrace shoulders (5 percent)
- Soils that are on smooth to concave slopes and have a thick, dark-colored surface layer more than 20 inches thick (5 percent)

Use and Management

Major uses: Irrigated and nonirrigated cropland, irrigated hayland, and rangeland

Major management factors: Depth to carbonates and wind erosion

Irrigated and nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by planting crops in narrow strips at right angles to the prevailing wind, subsoiling, and maintaining crop residue on the soil surface.

Irrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Rangeland

Dominant vegetation in natural potential plant community: Basin big sagebrush and bluebunch wheatgrass

General management considerations:

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Seeding of adapted species to improve the range is limited by the low precipitation during the growing season and by wind erosion.
- Production is limited mainly by the low precipitation during the growing season.

Interpretive Groups

Land capability classification: 2c, irrigated, and 4c, nonirrigated

Ecological site: Loamy, 11- to 13-inch precipitation zone

128—Tickason very fine sandy loam, 2 to 4 percent slopes

Composition

Tickason and similar soils—85 percent

Minor components—15 percent

Setting

Landform: Fan remnants

Elevation: 4,400 to 5,000 feet

Climatic data (mean annual):

Precipitation—about 12 inches

Air temperature—about 48 degrees F

Frost-free period—100 to 130 days

Characteristics of Tickason

Typical profile:

0 to 10 inches—grayish brown very fine sandy loam

10 to 23 inches—pale brown fine sandy loam

23 to 31 inches—very pale brown very fine sandy loam

31 to 38 inches—very pale brown fine sandy loam

38 to 60 inches—very pale brown loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 9.4 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—slight; by wind—moderate

Minor Components

- Kearns soils in depressions (5 percent)
- Neeley soils on convex slopes (10 percent)

Use and Management

Major uses: Irrigated and nonirrigated cropland, irrigated hayland, and rangeland

Major management factors: Depth to carbonates and wind erosion

Irrigated and nonirrigated cropland*Suitable crops:* Wheat and barley*General management considerations:*

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Reduce the risk of wind erosion by planting crops in narrow strips at right angles to the prevailing wind, subsoiling, and maintaining crop residue on the soil surface.

Irrigated hayland*Suitable crop:* Alfalfa hay*General management considerations:*

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Rangeland*Dominant vegetation in natural potential plant community:* Basin big sagebrush and bluebunch wheatgrass*General management considerations:*

- The limitations for use as rangeland are minimal if proper grazing management is used.
- Seeding of adapted species to improve the range is limited by the low precipitation during the growing season and by wind erosion.
- Production is limited mainly by the low precipitation during the growing season.

Interpretive Groups*Land capability classification:* 2e, irrigated, and 4c, nonirrigated*Ecological site:* Loamy, 11- to 13-inch precipitation zone**129—Tirod silt loam, 0 to 2 percent slopes*****Composition****Tirod and similar soils*—85 percent*Minor components*—15 percent***Setting****Landform:* Fan remnants*Elevation:* 4,300 to 5,000 feet*Climatic data (mean annual):*

Precipitation—about 13 inches

Air temperature—about 47 degrees F

Frost-free period—100 to 130 days

Characteristics of Tirod*Typical profile:*

0 to 18 inches—grayish brown silt loam

18 to 30 inches—light brownish gray loam

30 to 40 inches—pale brown clay loam

40 to 62 inches—very pale brown loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 12 inches

Potential rooting depth: 60 inches or more

Runoff: Negligible

Hazard of erosion: By water—none or slight; by wind—moderate

Minor Components

- Bingham soils in level areas (5 percent)
- Parleys soils on convex terrace backslopes (5 percent)
- Soils that are on smooth slopes and are noncalcareous (5 percent)

Use and Management

Major uses: Irrigated cropland and hayland

Major management factor: Depth to carbonates and wind erosion

Irrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Minimize the risk of erosion by planting crops in narrow strips at right angles to the prevailing wind, subsoiling, and maintaining crop residue on the soil surface.

Irrigated hayland

Suitable crop: Alfalfa hay

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Interpretive Groups

Land capability classification: 2c, irrigated, and 3c, nonirrigated

130—Toefoot silt loam, 0 to 4 percent slopes

Composition

*Toefoot and similar soils—*90 percent

*Minor components—*10 percent

Setting

Landform: Stream terraces and toeslopes

Elevation: 5,000 to 5,400 feet

Climatic data (mean annual):

Precipitation—about 15 inches

Air temperature—about 43 degrees F

Frost-free season—80 to 100 days

Characteristics of Toefoot

Typical profile:

0 to 26 inches—dark grayish brown and grayish brown silt loam

26 to 33 inches—light brownish gray gravelly loam

33 to 40 inches—light brownish gray very gravelly sandy loam

40 to 62 inches—light brownish gray and pale brown silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 11.7 inches

Potential rooting depth: 60 inches or more

Runoff: Low

Hazard of erosion: By water—slight

Minor Components

- Small areas of soils that have a seasonal high water table at the surface to a depth of 18 inches in spring (5 percent)
- Soils that have an average of more than 18 percent clay in the subsoil (5 percent)

Use and Management

Major uses: Nonirrigated cropland, hayland, and pastureland

Major management factor: Growing season

Nonirrigated cropland

Suitable crops: Wheat and barley

General management consideration:

- The short growing season limits the choice of crops.

Nonirrigated hayland and pastureland

Suitable crops: Alfalfa hay and pasture

General management considerations:

- To maintain the quality of meadows and to produce good yields of hay and forage, conservation practices such as managing nutrients and maintaining plant vigor are needed.
- Fencing, livestock watering facilities, and a planned grazing system are needed in areas used for pasture.

Interpretive Groups

Land capability classification: 3e, nonirrigated

131—Welby-Parleys complex, 0 to 2 percent slopes

Composition

*Welby and similar soils—*65 percent

*Parleys and similar soils—*20 percent

*Minor components—*15 percent

Setting

Landform: Lake terraces

Elevation: 4,400 to 5,200 feet

Climatic data (mean annual):

- Precipitation—about 14 inches
- Air temperature—about 48 degrees F
- Frost-free period—100 to 130 days

Characteristics of Welby

Position on landscape: Convex or smooth slopes

Typical profile:

- 0 to 11 inches—brown silt loam
- 11 to 36 inches—very pale brown silt loam
- 36 to 60 inches—very pale brown fine sandy loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderate

Available water capacity: 10.5 inches

Potential rooting depth: 60 inches or more

Runoff: Negligible

Hazard of erosion: By water—none or slight

Characteristics of Parleys

Position on landscape: Smooth or slightly concave slopes

Typical profile:

- 0 to 5 inches—grayish brown silt loam
- 5 to 26 inches—grayish brown silty clay loam
- 26 to 64 inches—white and light gray silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Moderately slow

Available water capacity: 12.8 inches

Potential rooting depth: 60 inches or more

Runoff: Negligible

Hazard of erosion: By water—none or slight

Minor Components

- Goosenawt soils on concave slopes (5 percent)
- Soils that are in relict stream channels and have rock fragments throughout the profile (5 percent)
- Tirod soils on smooth or concave slopes (5 percent)

Use and Management

Major uses: Irrigated and nonirrigated cropland and hayland

Major management factors: Permeability and depth to carbonates

Irrigated and nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The most suitable irrigation method is a sprinkler system.
- Adjust applications of irrigation water to the available water capacity and the water intake rate.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.

Irrigated and nonirrigated hayland*Suitable crop:* Alfalfa hay*General management considerations:*

- To maintain the quality of meadows and to produce good yields of hay, conservation practices such as using a sprinkler irrigation system that adequately controls irrigation water and minimizes water erosion, managing nutrients, and maintaining plant vigor are needed.

Interpretive Groups*Land capability classification:* 2c, irrigated, and 3c, nonirrigated**132—Wursten gravelly silt loam, 4 to 15 percent slopes*****Composition****Wursten and similar soils*—85 percent*Minor components*—15 percent***Setting****Landform:* Fan remnants*Elevation:* 5,300 to 5,700 feet*Climatic data (mean annual):*

Precipitation—about 14 inches

Air temperature—about 44 degrees F

Frost-free season—75 to 100 days

Characteristics of Wursten*Typical profile:*

0 to 16 inches—grayish brown gravelly silt loam

16 to 60 inches—very pale brown gravelly loam

Depth class: Very deep*Drainage class:* Well drained*Permeability:* Moderate*Available water capacity:* 8.5 inches*Potential rooting depth:* 60 inches or more*Runoff:* Medium*Hazard of erosion:* By water—moderate***Minor Components***

- Cedarhill soils on south-facing slopes (2 percent)
- Hades soils on concave slopes (5 percent)
- Justesen soils on smooth slopes (3 percent)
- Ririe soils on smooth slopes (2 percent)
- Samaria soils on south-facing slopes (1 percent)
- Soils that have slopes of less than 4 percent or more than 15 percent (2 percent)

Use and Management*Major uses:* Nonirrigated cropland, and rangeland*Major management factors:* Growing season, depth to carbonates, rock fragments on the surface, water erosion, and slope**Nonirrigated cropland***Suitable crops:* Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Continuous erosion of the topsoil will expose layers that are high in content of carbonates.
- High concentrations of carbonates in the calcareous layer inhibit the uptake of certain nutrients and limit plant growth. Soil amendments are needed.
- Rock fragments on the surface make seedbed preparation difficult.
- Minimize the risk of erosion by constructing terraces, chiseling stubble fields on the contour or across the slope in fall, and maintaining crop residue on the soil surface.

Rangeland

Dominant vegetation in natural potential plant community: Basin big sagebrush and bluebunch wheatgrass

General management consideration:

- The limitations for use as rangeland are minimal if proper grazing management is used.

Interpretive Groups

Land capability classification: 3e, nonirrigated

Ecological site: Loamy, 12- to 16-inch precipitation zone

133—Yago-Manila complex, 20 to 40 percent slopes***Composition***

*Yago and similar soils—*40 percent

*Manila and similar soils—*35 percent

*Minor components—*25 percent

Setting

Landform: Fan remnants

Elevation: 4,900 to 6,500 feet

Climatic data (mean annual):

Precipitation—about 18 inches

Air temperature—about 43 degrees F

Frost-free period—70 to 90 days

Characteristics of Yago

Position on landscape: Convex slopes

Typical profile:

0 to 10 inches—dark brown very stony silty clay loam

10 to 40 inches—strong brown and reddish yellow very cobbly clay loam

40 to 60 inches—reddish yellow very cobbly silty clay loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Slow

Available water capacity: 7.8 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Characteristics of Manila

Position on landscape: Convex or slightly concave slopes

Typical profile:

0 to 5 inches—grayish brown silt loam

5 to 45 inches—brown and light brown silty clay loam and silty clay

45 to 60 inches—pink silt loam

Depth class: Very deep

Drainage class: Well drained

Permeability: Slow

Available water capacity: 10.7 inches

Potential rooting depth: 60 inches or more

Runoff: Very high

Hazard of erosion: By water—severe

Minor Components

- Hades soils on ridges and concave slopes (15 percent)
- Lizardale soils on steep slopes (10 percent)

Use and Management

Major uses: Nonirrigated cropland, and rangeland

Major management factors: Growing season, permeability, rock fragments on the surface, water erosion, and slope

Nonirrigated cropland

Suitable crops: Wheat and barley

General management considerations:

- The short growing season limits the choice of crops.
- Rock fragments on the surface make seedbed preparation difficult.
- Minimize the risk of erosion and increase the water intake rate by chiseling stubble fields on the contour or across the slope in fall, maintaining crop residue on the soil surface, and limiting the number of tillage operations.

Rangeland

Dominant vegetation in natural potential plant community: Mountain big sagebrush and bluebunch wheatgrass

General management considerations:

- Seeding of adapted species to improve the range is limited by the rock fragments on the surface, water erosion, and slope.
- Use of equipment is limited by the rock fragments on the surface and slope.

Interpretive Groups

Land capability classification: 6e, nonirrigated

Ecological site: Yago—Stony Loam, 16- to 22-inch precipitation zone; Manila—Loamy, 16- to 22-inch precipitation zone

134—Water

This map unit consists of areas, such as lakes and ponds, that are covered with deep water for most of the year.

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as rangeland and woodland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; and for wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited*, *somewhat limited*, and *very limited*. The suitability ratings are expressed as *good*, *fair*, and *poor*.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations

appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Crops and Pasture

Travis James, area agronomist, and Dan Ogle, range conservationist, helped to prepare this section.

General management needed for crops and pasture is suggested in this section. The estimated yields of the main crops and pasture plants are listed, the system of land capability classification used by the Natural Resources Conservation Service is explained, and prime farmland is described.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading "Detailed Soil Map Units." Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

The survey area has about 264,000 acres of cropland, hayland, and pastureland. Of this, about 210,900 acres is nonirrigated cropland, 32,300 acres is irrigated cropland, and 20,900 acres is hayland and pastureland. About one-half of the farms and ranches are combined farming and livestock operations.

Field crops suited to the soils and climate in the nonirrigated areas include wheat and barley. A small amount of alfalfa is grown for hay, but it is limited by a shortage of available moisture in summer. The main crops produced in the irrigated areas are wheat, barley, and alfalfa. Small acreages of safflower and grass for seed are also grown.

Approximately 14,000 acres of the hayland and pastureland consists of wet and semiwet meadows. Most of this acreage is along the Big and Little Malad Rivers, Deep Creek, and Rock Creek. Representative soils in these areas are those of the Logan, Langless, and Brinnum series.

The cropping sequence used on the majority of the nonirrigated cropland is a summer fallow-wheat rotation. Also used is a 3-year rotation of winter wheat followed by spring wheat or barley and then summer fallow. Recently, annual cropping has become more popular, especially in the areas of higher precipitation.

Loss of the surface layer through sheet and rill erosion is a serious concern in areas of nonirrigated crops. As the surface layer is lost and part of the subsoil is incorporated into the plow layer, productivity is reduced. Concentrated flow erosion creates deep gullies in areas of moderate or steep slopes. These gullies are a considerable hazard to the operation of farm machinery. Soil eroded from cropland is deposited in streams, reducing the quality of water for municipal and recreational uses and for fish and wildlife and reducing the storage capacity of irrigation reservoirs.

Erosion control measures are designed to provide a protective cover for the soil surface, to reduce runoff, and to increase water infiltration. A cropping system that keeps plant cover on the soil surface reduces soil erosion losses to an amount that maintains the productive capacity of the soils. Including legumes in the crop rotation helps to control soil erosion and maintain soil fertility and tilth. Soils that have good tilth are granular and porous and have a high water infiltration rate. Minimum tillage and no-till practices help to reduce soil compaction and maintain soil tilth. Maintaining crop residue on a minimum of 30 percent of the soil surface per acre at the time of planting also increases infiltration and minimizes runoff and soil erosion.

Terraces and diversions reduce the length of slopes, which helps to minimize runoff and soil erosion. They are most suited to very deep, well drained soils that have uniform slopes of about 12 to 15 percent. Soils such as those of the Arbone, Broadhead, Manila, Rexburg, and Ririe series are suitable for terraces and

diversions. Contour farming, cross-slope farming, and stripcropping can also be used to minimize soil erosion.

Information on the design of soil erosion control measures for each kind of soil is available at the local office of the Natural Resources Conservation Service.

Irrigation water is taken from local streams, reservoirs, and wells. The majority of the water available for irrigation is supplied by snowmelt. Irrigation methods used are surface and sprinkler irrigation systems. The meadows south of Malad City are irrigated partially by subsurface moisture. The area southwest of Malad City, known as Pocatello Valley, is a large closed basin, or playa, that is ponded during years of high precipitation.

The cropping sequence for irrigated farms generally consists of 2 or 3 years of small grain and 5 to 10 years of alfalfa. Shortages of irrigation water occur in 5 years out of 10. Applications of irrigation water should be adjusted to the available water capacity of the soil, the water intake rate, the soil depth, and the needs of the crop grown.

Most of the soils used for crops have a loam surface layer that is low in content of organic matter. Regular additions of crop residue and manure can help to maintain or increase organic matter content, improve soil structure and fertility, and increase the available water capacity and the water infiltration rate. Cultivated crops, hay, and pasture respond to applications of fertilizer. Wheat, barley, and grass for pasture and seed respond to applications of nitrogen, phosphorus, and sulfur. Legumes respond to applications of phosphorus and sulfur. A much higher rate of application of fertilizer is needed on irrigated soils than on nonirrigated soils. On all soils, the rate of application should be based on the results of soil tests, the needs of the crop grown, and the expected level of yields. On nonirrigated soils, the available moisture content should also be considered in determining the rate of application. A good fertilization program is essential for high production.

Yields per Acre

The average yields per acre that can be expected of the principal crops under a high level of management are shown in table 5. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

For yields of irrigated crops, it is assumed that the irrigation system is adapted to the soils and to the crops grown, that good-quality irrigation water is uniformly applied as needed, and that tillage is kept to a minimum.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in table 5 are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local

office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for woodland, or for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit (USDA, 1961). Only class and subclass are used in this survey.

Capability classes, the broadest groups, are designated by numerals 1 through 8. The numerals indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have few limitations that restrict their use.

Class 2 soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.

Class 5 soils are not likely to erode but have other limitations, impractical to remove, that limit their use.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation.

Class 7 soils have very severe limitations that make them unsuitable for cultivation.

Class 8 soils and miscellaneous areas have limitations that nearly preclude their use for commercial crop production.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e*, *w*, *s*, or *c*, to the class numeral, for example, 2*e*. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c*, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w*, *s*, or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, woodland, wildlife habitat, or recreation.

The capability classification of map units in this survey area is given in the section “Detailed Soil Map Units” and in the yields table.

Prime Farmland

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation’s short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of

government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

A recent trend in land use in some parts of the survey area has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

The map units in the survey area that are considered prime farmland are listed in this section. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in table 4. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described under the heading "Detailed Soil Map Units." The map units that meet the requirements for prime farmland are:

- 2 Arbone silt loam, 0 to 4 percent slopes
- 9 Bingham gravelly loam, 1 to 4 percent slopes (if irrigated)
- 10 Bingham-Tirol complex, 0 to 2 percent slopes
- 12 Bothwell silt loam, 0 to 2 percent slopes
- 15 Buckboard loam, 0 to 2 percent slopes
- 26 DeJarnet gravelly silt loam, 0 to 4 percent slopes (if irrigated)
- 30 Elevator silt loam, 0 to 4 percent slopes
- 31 Elevator-Jensen complex, 0 to 4 percent slopes
- 34 Goosenawt gravelly loam, 0 to 2 percent slopes
- 52 Jensen silt loam, 0 to 2 percent slopes
- 53 Jensen silt loam, 2 to 6 percent slopes
- 55 Jovine silt loam, 0 to 2 percent slopes
- 59 Kearns silt loam, 0 to 2 percent slopes
- 60 Kearns silt loam, 2 to 4 percent slopes
- 61 Kidman fine sandy loam, 1 to 4 percent slopes
- 67 Lanoak silt loam, 0 to 4 percent slopes
- 84 Parleys silt loam, 0 to 2 percent slopes
- 85 Parleys silt loam, 2 to 4 percent slopes
- 96 Rexburg silt loam, 1 to 4 percent slopes
- 119 Samaria silt loam, 0 to 4 percent slopes
- 127 Tickason very fine sandy loam, 0 to 2 percent slopes (if irrigated)
- 128 Tickason very fine sandy loam, 2 to 4 percent slopes (if irrigated)

129 Tirod silt loam, 0 to 2 percent slopes

130 Toefoot silt loam, 0 to 4 percent slopes

Rangeland

Dan Ogle, area range conservationist, helped to prepare this section.

Rangeland and grazing land are important to the economy of the survey area. Of the 679,000 acres in the area, approximately 51 percent is privately owned, 40 percent is administered by the Bureau of Land Management, 7 percent is administered by the Forest Service, and 2 percent is managed by the Idaho Department of Lands under a State of Idaho Endowment (school).

About 63 percent of the area is rangeland and 3 percent is irrigated hayland or pastureland, which is used primarily for the production of forage and browse for livestock and wildlife.

The remaining land is used as cropland and for roads, municipal purposes, and other such purposes. The crop aftermath in some areas of cropland is used as forage in fall. Nearly all of the land in the survey area is used by livestock or wildlife at some time during the year.

Cow-calf operations are the most common livestock enterprises. A few purebred beef cattle, sheep, pig, and cattle feedlot operations are also in the area. Ranch sizes vary, but they generally consist of 200 to 400 acres of private land with grazing privileges on Federal land.

The areas of rangeland below an elevation of 6,000 feet are used primarily in spring and fall, and those above an elevation of 6,000 feet are used primarily during the warmer summer months.

Proper management is needed to maintain or improve the basic soil and plant resources. Important range management practices include planned grazing systems (primarily rotations), proper grazing use, and proper season of use. Practices that help to accomplish these goals and help to achieve good distribution of grazing include properly locating salt and watering facilities and fencing. The suitability of range improvement practices such as brush management, range seeding, and water developments depends on specific characteristics of the soils. Information on these characteristics and the suitabilities of the soils can be found in the section "Detailed Soil Map Units."

In areas that have similar climate and topography, differences in the kind and amount of rangeland or forest understory vegetation are closely related to the kind of soil. Effective management is based on the relationship between the soils and vegetation and water.

Table 6 shows, for each soil that supports vegetation suitable for grazing, the ecological site; the total annual production of vegetation in favorable, normal, and unfavorable years; the characteristic vegetation; and the average percentage of each species. An explanation of the column headings in table 6 follows.

An *ecological site* is the product of all the environmental factors responsible for its development. It has characteristic soils that have developed over time throughout the soil development process; a characteristic hydrology, particularly infiltration and runoff, that has developed over time; and a characteristic plant community (kind and amount of vegetation). The hydrology of the site is influenced by development of the soil and plant community. The vegetation, soils, and hydrology are all interrelated. Each is influenced by the others and influences the development of the others. The plant community on an ecological site is typified by an association of species that differs from that of other ecological sites in the kind and/or proportion of species or in total production. Descriptions of ecological sites are provided in the Field Office Technical Guide, which is available in local offices of the Natural Resources Conservation Service.

Total dry-weight production is the amount of vegetation that can be expected to grow annually in a well managed area that is supporting the potential natural plant community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation for favorable, normal, and unfavorable years. In a favorable year, the amount and distribution of precipitation and the temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture. Yields are adjusted to a common percent of air-dry moisture content.

Characteristic vegetation—the grasses, forbs, and shrubs that make up most of the potential natural plant community on each soil—is listed by common name. Under *rangeland composition*, the expected percentage of the total annual production is given for each species making up the characteristic vegetation. The amount that can be used as forage depends on the kinds of grazing animals and on the grazing season.

Range management requires a knowledge of the kinds of soil and of the potential natural plant community. It also requires an evaluation of the present range similarity index and rangeland trend. Range similarity index is determined by comparing the present plant community with the potential natural plant community on a particular rangeland ecological site. The more closely the existing community resembles the potential community, the higher the range similarity index. Rangeland trend is defined as the direction of change in an existing plant community relative to the potential natural plant community. Further information about the range similarity index and rangeland trend is available in chapter 4 of the "National Range and Pasture Handbook" (<http://www.glti.nrcs.usda.gov/technical/publications/nrph.html>).

The objective in range management is to control grazing so that the plants growing on a site are about the same in kind and amount as the potential natural plant community for that site. Such management generally results in the optimum production of vegetation, control of undesirable brush species, conservation of water, and control of erosion. Sometimes, however, an area with a range similarity index somewhat below the potential meets grazing needs, provides wildlife habitat, and protects soil and water resources.

Windbreaks and Environmental Plantings

Windbreaks protect livestock, buildings, and yards from wind and snow. They also protect fruit trees and gardens, and they furnish habitat for wildlife. Several rows of low- and high-growing broadleaf and coniferous trees and shrubs provide the most protection.

Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field. The interval depends on the erodibility of the soil. Field windbreaks protect cropland and crops from wind, help to keep snow on the fields, and provide food and cover for wildlife.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced. To ensure plant survival, a healthy planting stock of suitable species should be planted properly on a well prepared site and maintained in good condition.

Table 7 shows the height that locally grown trees and shrubs are expected to reach in 20 years on various soils. The estimates in the table are based on measurements and observation of established plantings that have been given adequate care. They can be used as a guide in planning windbreaks and screens. Additional information on planning windbreaks and screens and planting and caring for trees and shrubs

can be obtained from the local office of the Natural Resources Conservation Service or of the Cooperative Extension Service or from a commercial nursery.

Recreation

The soils of the survey area are rated in tables 8a and 8b according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in tables 8a and 8b can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be

dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Off-road motorcycle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Wildlife

By Frank Fink, wildlife biologist, Natural Resources Conservation Service.

This section relates the general soil map units in this survey area to the expected occurrences of certain wildlife species. Wildlife populations in an area typically are related to the vegetation. The vegetation is closely related to the soil and its ability to produce herbaceous and woody plants.

The survey area supports a variety of resident game and nongame fish and wildlife including mammals, birds, reptiles, and amphibians. Migratory species of wildlife, most of which are avian species, also use the area.

Because the survey area has a variety of habitats, it supports a wide array of wildlife resources. Mountains, foothills, bottomland, and drainageways and their associated topography, soils, precipitation, and land uses provide diverse habitats that support a variety of wildlife.

The areas at the higher elevations support juniper, sagebrush, aspen, and smaller amounts of pine and fir. The shrubby vegetation in these mountainous areas includes serviceberry, snowberry, sagebrush, and bitterbrush.

Expanses of sagebrush, bitterbrush, rabbitbrush, and wheatgrasses are at the intermediate elevations. Springs and wet meadows are scattered throughout the

survey area. Typically, they are along the old Lake Bonneville shoreline. Riparian areas occur as linear ribbons, frequently extending through two or more major soil groups. The vegetation associated with these areas includes willow, cottonwood, dogwood, alder, sedges, rushes, and other water-loving grasses.

The fish and wildlife populations in the survey area are largely determined by the suitability of the habitat, which includes the supply of food, the amount of cover, and the availability of water. Habitats differ in their capacity to provide these essential needs. Some of the deficiencies are a result of the characteristics of the soils and others are the result of management. Good management practices are needed to improve the habitat for wildlife as well as for the other uses of the soils.

Soils affect the kind and amount of vegetation available to wildlife as food and cover. They also affect the construction of water impoundments. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, and by promoting the natural establishment of desirable plants.

Big game

The big game species in the survey area include elk, mule deer, and antelope. The populations of elk are relatively small when compared to other areas in southeastern Idaho. Elk habitat is in the southeastern and extreme north-central parts of the survey area. These areas correlate with general soil map units 1, 2, and 4. They are mountainous, are gently sloping to very steep, and support juniper, sagebrush, some conifers, aspen in the draws, and range grasses.

Mule deer are throughout the survey area. Mule deer habitat in the area consists of isolated mountain ranges interspersed with agricultural land and rangeland in the valleys. Mule deer populations are dependent on available habitat in winter and summer. Aspen is a major component of mule deer habitat. Tall mountain brush communities consisting of juniper, sagebrush, bitterbrush, rabbitbrush, snowberry, and aspen provide habitat for mule deer in summer. These communities typically are associated with general soil map units 1, 2, 7, and 10.

Winter habitat for mule deer is a critical component for sustaining the populations in the area. Juniper is a common cover type in areas of winter range. Sagebrush and bitterbrush provide important forage in winter. Severe winter weather dramatically reduces the available habitat in winter. Depradation is common and mortality is high during severe winters. Mule deer winter at the lower elevations in general soil map units 1 and 2 during mild winters and in units 4 through 9 and unit 11 during harsher winters.

Antelope are in the nearly level to moderately steep areas, commonly in the southwestern part of the survey area. General soil map units 7, 9, and 13 are associated with these areas. The vegetation is characterized by nearly level grasslands to moderately steep areas that support dominantly juniper, sagebrush, and bunchgrasses.

Upland game

Common upland game birds in the area include pheasants, gray partridge, sharp-tailed grouse, sage grouse, ruffed grouse, blue grouse, and mourning dove.

The birds associated with the agricultural areas are pheasants and gray partridge and to a lesser extent sharp-tailed grouse. Pheasants and gray partridge are associated with general soil map units 5, 6, and 7. These areas typically are farmed; therefore, they provide limited habitat for these species. Winter habitat for these birds is associated with the riparian areas in general soil map unit 6. The limited quality of the nesting and winter habitat restricts the populations of pheasants and gray partridge.

One of the largest concentrations of sharp-tailed grouse in southeastern Idaho is in the survey area. Sharp-tailed grouse typically are associated with general soil map units 6 through 9 and unit 13. These grouse use the areas of grassland with some

brushy cover (sagebrush, bitterbrush, and serviceberry) in summer. They feed on seeds and cultivated grain late in summer and in fall. Brush species provide food in fall and winter, and they are an extremely important component of the habitat for sharp-tailed grouse.

Sage grouse use areas similar to those used by sharp-tailed grouse, but sage grouse are more dependent on the sagebrush in the plant community. Sage grouse can be found in general soil map units 6 through 9 and unit 13.

Ruffed grouse and blue grouse inhabit the timbered mountainous areas. These species generally are associated with general soil map units 1 through 4, but at certain times of the year they are also associated with the areas at the higher elevations in general soil map units 7 and 8. Ruffed grouse commonly are associated with the riparian areas that support stands of dominantly aspen. Blue grouse typically are associated with stands of fir and pine at the higher elevations.

Furbearers

Furbearers, such as otter, beaver, mink, raccoon, and muskrat, live in and around the creeks and streams in the survey area. The major riparian areas are in general soil map units 6, 12, and 13. Small creeks throughout the survey area extend into the foothills and mountains and provide additional riparian areas for these furbearers. Coyote, red fox, and skunk are throughout the area, in all of the general soil map units.

Waterfowl

Waterfowl are concentrated along streams, rivers, and reservoirs in the survey area. Typical avian species associated with the lakes, streams, and wetlands include geese, mallards, teal, sandhill crane, and long-billed curlew. The main concentrations of waterfowl are associated with general soil map units 6, 12, and 13. The lower Malad River, south of Malad, provides habitat for the highest concentration of waterfowl in the area. Insufficient undisturbed nesting cover and inadequate brood-rearing cover limit waterfowl populations in the survey area.

Raptors

Raptors are throughout the area, in all of the general soil map units. Golden eagle, bald eagle, red-tailed hawk, marsh hawk, rough-legged hawk, ferruginous hawk, American kestrel, and at times, peregrine falcon have been known to inhabit the survey area.

Threatened and endangered species

Two threatened or endangered wildlife species are known to migrate through the survey area. Bald eagle and peregrine falcon have been sighted in the area but are not known to use the area for nesting. Bald eagle feed in areas associated with lakes, rivers, and reservoirs, and they are associated with general soil map units 6, 12, and 13, near the major streams and wetlands. During migration, though, they may be found in areas away from wetlands feeding on winterkill carcasses, jackrabbits, and ground squirrels. Peregrine falcon are associated with areas of open rangeland and bottomland. All of the general soil map units, except those in the mountainous areas, provide suitable habitat for peregrine falcon.

The Idaho Department of Fish and Game, Idaho Conservation Data Center, has identified one plant in the area as being of special concern. Western waterleaf (*Hydrophyllum occidentale*) is a rare plant in the area. It typically is in moist open areas of Douglas fir forests.

Fisheries

Fisheries in the survey area are limited to stream and reservoir habitat. Several reservoirs provide fishing opportunities for local residents. Daniels, St. Johns, Pleasant View, Deep Creek, Weston, and Devils Creek Reservoirs are the most

important fisheries in the area. The Idaho Department of Fish and Game have stocked these reservoirs with rainbow trout, cutthroat trout, largemouth bass, tiger muskie, and panfish.

The stream fisheries are limited because of poor habitat. Excessive sediment deposited in the creeks as a result of poor watershed management has lowered the fish populations in the survey area. Resident game fish in the streams and creeks are rainbow trout and cutthroat trout.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the estimated data and test data in the "Soil Properties" section.

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil within a depth of 5 or 6 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about grain-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 or 6 feet of the surface, soil wetness, depth to a seasonal high water table, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Tables 9a and 9b show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and

grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Sanitary Facilities

Tables 10a and 10b show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may

not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on

the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

Construction Materials

Tables 11a and 11b give information about the soils as potential sources of gravel, sand, topsoil, reclamation material, and roadfill. Normal compaction, minor processing, and other standard construction practices are assumed.

Gravel and *sand* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 11a, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good*, *fair*, or *poor* as potential sources of gravel and sand. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of gravel or sand. The number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

The soils are rated *good*, *fair*, or *poor* as potential sources of topsoil, reclamation material, and roadfill. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features

indicate the degree to which the features limit the soils as sources of topsoil, reclamation material, or roadfill. The lower the number, the greater the limitation.

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Water Management

Table 12 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special

design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are ascertained by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering index properties, physical and chemical properties, and pertinent soil and water features.

Engineering Index Properties

Table 13 gives estimates of the engineering classification and of the range of index properties for the major layers of each soil in the survey area. Most soils have layers of contrasting properties within the upper 5 or 6 feet.

Depth to the upper and lower boundaries of each layer is indicated. The range in depth and information on other properties of each layer are given for each soil series under the heading "Soil Series and Their Morphology."

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is as much as about 15 percent, an appropriate modifier is added, for example, "gravelly." Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 1998) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 1998).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to grain-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the

other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an oven-dry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

The estimates of grain-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is omitted in the table.

Physical Properties

Table 14 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller. The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In table 14, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (oven-dry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $1/3$ - or $1/10$ -bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root

penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability (K_{sat}) refers to the ability of a soil to transmit water or air. The term “permeability,” as used in soil surveys, indicates saturated hydraulic conductivity (K_{sat}). The estimates in the table indicate the rate of water movement, in inches per hour, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $1/3$ - or $1/10$ -bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 14, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in table 14 as the K factor (K_w and K_f) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of several factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor K_w indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor K_f indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1

are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are as follows:

1. Coarse sands, sands, fine sands, and very fine sands.
2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material.
3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.
- 4L. Calcareous loams, silt loams, clay loams, and silty clay loams.
4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay.
5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.
6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay.
7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material.
8. Soils that are not subject to wind erosion because of rock fragments on the surface or because of surface wetness.

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Chemical Properties

Table 15 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Effective cation-exchange capacity refers to the sum of extractable bases plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Gypsum is expressed as a percent, by weight, of hydrated calcium sulfates in the fraction of the soil less than 20 millimeters in size. Gypsum is partially soluble in water. Soils that have a high content of gypsum may collapse if the gypsum is removed by percolating water.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Sodium adsorption ratio (SAR) is a measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration. Soils that have SAR values of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced permeability and aeration, and a general degradation of soil structure.

Water Features

Table 16 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff is water that flows off the surface of the land without sinking into the soil. Runoff classes are estimated by considering the slope and the permeability (K_{sat}) of the upper 1 meter of soil material and taking into account bedrock or cemented layers.

The *months* in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. Table 16 indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish

colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. Table 16 indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and frequency are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Soil Features

Table 17 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness of the restrictive layer, which significantly affects the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Subsidence is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place

gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low*, *moderate*, or *high*, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low*, *moderate*, or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (USDA, 1975). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 18 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Eleven soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Mollisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Xeroll (*Xer*, meaning dry, plus *oll*, from Mollisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Haploxerolls (*Hapl*, meaning minimum horizon development, plus *xeroll*, the suborder of the Mollisols that has a xeric moisture regime or an aridic moisture regime that borders on xeric).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Calcic* identifies the intergrade subgroup that has a calcic horizon or identifiable secondary carbonates at critical depths in the soil profile. An example is Calcic Haploxerolls.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle size, mineral content, soil temperature regime, soil depth, and reaction. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is coarse-silty, mixed, frigid Calcic Haploxerolls.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. An example of a soil with the taxonomic classification given above is the Rexburg series.

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the "Soil Survey Manual" (USDA, 1993). Many of the technical terms used in the descriptions are defined in "Soil Taxonomy" (USDA, 1975) and in "Keys to Soil Taxonomy" (USDA, 1994). Unless otherwise indicated, colors in the descriptions are for dry soil. Following the pedon description is the range of important characteristics of the soils in the series.

The map units of each soil series are described in the section "Detailed Soil Map Units."

Araveton Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Fan remnants and lava plains

Parent material: Kind—alluvium; source—mixed

Slope range: 4 to 40 percent

Elevation: 4,900 to 6,200 feet

Mean annual precipitation: 14 to 16 inches

Mean annual air temperature: 42 to 46 degrees F

Frost-free period: 80 to 100 days

Taxonomic class: Fine-loamy, mixed, frigid Calcic Haploxerolls

Typical Pedon

Araveton silt loam in an area of Hutchley-McCarey-Araveton complex, 4 to 40 percent slopes; about 6 miles west and 1 mile south of Holbrook, in Oneida County, Idaho; about 900 feet north and 200 feet east of the southwest corner of sec. 6, T. 15 S., R. 32 E.

- A—0 to 8 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak thick and medium platy structure parting to weak very thin platy; slightly hard, friable, slightly sticky and slightly plastic; common very fine to coarse roots; common very fine tubular pores and many very fine irregular pores; 5 percent gravel; slightly alkaline (pH 7.5); clear wavy boundary.
- Bw1—8 to 17 inches; brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure parting to moderate fine granular; slightly hard, friable, slightly sticky and slightly plastic; common very fine to coarse roots; common very fine and fine tubular pores and common very fine irregular pores; 5 percent gravel; slightly alkaline (pH 7.6); abrupt wavy boundary.
- Bw2—17 to 27 inches; brown (10YR 5/3) silt loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; common very fine and fine tubular pores; 5 percent gravel; slightly alkaline (pH 7.7); clear wavy boundary.
- Bk1—27 to 36 inches; brown (10YR 5/3) silt loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; common very fine tubular pores; 10 percent gravel and 3 percent cobbles; slightly

effervescent; 15 percent carbonate threads; slightly alkaline (pH 7.8); abrupt wavy boundary.

Bk2—36 to 51 inches; pale brown (10YR 6/3) gravelly loam, brown (10YR 5/3) moist; moderate fine, medium, and coarse subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few very fine and fine roots; common very fine tubular pores; 15 percent gravel and 5 percent cobbles; strongly effervescent; 15 percent carbonate threads; moderately alkaline (pH 8.3); abrupt wavy boundary.

Bk3—51 to 62 inches; very pale brown (10YR 8/2) gravelly loam, very pale brown (10YR 7/3) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; common very fine irregular pores; 20 percent gravel and 10 percent cobbles; violently effervescent; 90 percent carbonate coatings on rock fragments; moderately alkaline (pH 8.4).

Range in Characteristics

Profile:

Thickness of mollic epipedon—7 to 17 inches

Depth to secondary carbonates—20 to 30 inches

Particle-size control section (average):

Clay content—18 to 26 percent

Rock fragment content—5 to 30 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bw horizon:

Value—5 or 6 dry, 3 or 4 moist

Chroma—2 or 3 dry or moist

Texture—silt loam or loam

Bk horizon:

Value—5 to 8 dry, 4 to 7 moist

Chroma—2 or 3 dry or moist

Texture—silt loam or gravelly loam

Calcium carbonate equivalent—10 to 35 percent

Arbone Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Fan remnants

Parent material: Kind—alluvium; source—mixed

Slope range: 0 to 30 percent

Elevation: 5,000 to 5,700 feet

Mean annual precipitation: 12 to 16 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 75 to 100 days

Taxonomic class: Coarse-loamy, mixed, frigid Calcic Haploxerolls

Typical Pedon

Arbone silt loam in an area of Arbone-Hondoho-Cedarhill complex, 12 to 30 percent slopes; near Roy Summit, in Oneida County, Idaho; about 2,500 feet south and 500 feet west of the northeast corner of sec. 3, T. 13 S., R. 31 E.

- A—0 to 10 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine, common fine, and few medium roots; many very fine tubular pores; slightly alkaline (pH 7.6); clear wavy boundary.
- Bw—10 to 15 inches; grayish brown (10YR 5/2) silt loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, common fine, and few medium roots; many very fine and fine tubular pores; slightly effervescent; slightly alkaline (pH 7.6); clear wavy boundary.
- Bk1—15 to 26 inches; brown (10YR 5/3) gravelly silt loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine and common fine roots; common very fine tubular pores; 15 percent gravel; strongly effervescent; moderately alkaline (pH 8.0); gradual wavy boundary.
- Bk2—26 to 31 inches; brown (10YR 5/3) gravelly silt loam, dark grayish brown (10YR 4/2) moist; massive; soft, very friable, slightly sticky and slightly plastic; many very fine and few fine roots; common fine tubular pores; 15 percent gravel; strongly effervescent; slightly alkaline (pH 7.8); gradual wavy boundary.
- Bk3—31 to 49 inches; light brownish gray (10YR 6/2) gravelly silt loam, brown (10YR 5/3) moist; massive; soft, very friable, slightly sticky and slightly plastic; common very fine and few fine roots; few very fine tubular pores; 40 percent medium carbonate masses; 20 percent gravel; violently effervescent; moderately alkaline (pH 8.0); gradual wavy boundary.
- C—49 to 60 inches; very pale brown (10YR 7/3) gravelly silt loam, yellowish brown (10YR 5/4) moist; massive; soft, very friable, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; 20 percent gravel; strongly effervescent; moderately alkaline (pH 8.0).

Range in Characteristics

Profile:

Thickness of mollic epipedon—10 to 18 inches
 Depth to secondary carbonates—12 to 25 inches

Particle-size control section (average):

Clay content—13 to 18 percent
 Rock fragment content—5 to 35 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist
 Chroma—2 or 3 dry or moist

Bw horizon:

Value—4 or 5 dry, 2 or 3 moist
 Chroma—2 or 3 dry or moist

Bk horizon:

Value—5 to 8 dry, 4 to 6 moist
 Chroma—2 or 3 dry or moist
 Texture—gravelly silt loam or gravelly loam
 Calcium carbonate equivalent—5 to 30 percent

C horizon:

Value—5 to 8 dry, 4 to 6 moist
 Chroma—3 or 4 dry or moist
 Texture—gravelly silt loam or gravelly loam

Bayhook Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderately slow

Landform: Lake terraces

Parent material: Kind—lacustrine deposits; source—mixed

Slope range: 0 to 4 percent

Elevation: 4,400 to 4,700 feet

Mean annual precipitation: 8 to 11 inches

Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 110 to 130 days

Taxonomic class: Coarse-silty, mixed, mesic Sodic Xeric Haplocalcids

Typical Pedon

Bayhook silt loam, 0 to 2 percent slopes; about 2 miles south and 3 miles east of Black Pine, in Oneida County, Idaho; about 800 feet south and 300 feet east of the northwest corner of sec. 10, T. 16 S., R. 30 E.

A1—0 to 3 inches; light brownish gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist; moderate very thick platy structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; few very fine tubular pores and many very fine and few fine vesicular pores; slightly effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

A2—3 to 7 inches; light brownish gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist; weak coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine to coarse roots; common very fine and few fine tubular pores and common very fine vesicular pores; slightly effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary.

Bk1—7 to 13 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine and few fine and coarse roots; common very fine tubular pores; 35 percent cicada krotovinas; strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

Bk2—13 to 25 inches; light gray (2.5Y 7/2) silt loam, light brownish gray (2.5Y 6/2) moist; massive; very hard, firm, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; violently effervescent; strongly alkaline (pH 8.5); discontinuous weakly cemented laminar zones; 35 percent cicada krotovinas; abrupt wavy boundary.

Bk3—25 to 33 inches; pale yellow (2.5Y 8/2) silt loam, light brownish gray (2.5Y 6/2) moist; massive; hard, friable, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; 35 percent cicada krotovinas; violently effervescent; strongly alkaline (pH 8.8); abrupt wavy boundary.

Bk4—33 to 60 inches; pale yellow (2.5Y 8/2) silt loam, light brownish gray (2.5Y 6/2) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; 10 percent cicada krotovinas; 2 percent rounded gravel; violently effervescent; strongly alkaline (pH 8.8).

Range in Characteristics

Profile:

Depth to calcic horizon—6 to 18 inches

Particle-size control section (average):

Clay content—6 to 17 percent

A horizon:

Value—3 or 4 moist

Chroma—2 or 3 dry or moist

Bk horizon:

Hue—10YR to 5Y

Value—6 to 8 dry, 4 to 6 moist

Chroma—2 to 4 dry or moist

Content of cicada krotovinas—10 to 50 percent

Calcium carbonate equivalent—5 to 30 percent

Sodium adsorption ratio—13 to 30 to a depth of 40 inches

Bingham Taxadjunct*Depth class:* Very deep (greater than 60 inches)*Drainage class:* Well drained*Permeability:* Moderate in the upper part and rapid in the lower part*Landform:* Lake terraces*Parent material:* Kind—alluvium over lacustrine deposits; source—quartzite and limestone*Slope range:* 0 to 4 percent*Elevation:* 4,500 to 4,900 feet*Mean annual precipitation:* 14 to 16 inches*Mean annual air temperature:* 46 to 48 degrees F*Frost-free period:* 100 to 120 days*Taxonomic class:* Fine-loamy, mixed, mesic Calcic Pachic Argixerolls**Typical Pedon**

Bingham gravelly loam in an area of Bingham-Tirod complex, 0 to 2 percent slopes; about 2 miles north of Malad City, in Oneida County, Idaho; about 1,220 feet south and 1,320 feet east of the northwest corner of sec. 10, T. 14 S., R. 36 E.

Ap—0 to 6 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure parting to moderate fine and medium granular; soft, very friable, slightly sticky and slightly plastic; common very fine to medium and few coarse roots; 20 percent gravel; neutral (pH 7.2); abrupt smooth boundary.

Bt1—6 to 11 inches; grayish brown (10YR 5/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine and few fine and medium roots; 40 percent faint clay films on faces of peds and lining pores; 15 percent gravel; neutral (pH 7.2); abrupt wavy boundary.

Bt2—11 to 27 inches; yellowish brown (10YR 5/4) gravelly loam, dark brown (10YR 3/3) moist; weak medium prismatic structure parting to moderate medium and coarse subangular blocky; hard, firm, moderately sticky and moderately plastic; common very fine and few fine and medium roots; 70 percent distinct clay films on faces of peds and lining pores; 20 percent gravel and 5 percent cobbles; slightly alkaline (pH 7.6); clear wavy boundary.

2Bt3—27 to 38 inches; light yellowish brown (10YR 6/4) very gravelly sandy loam, dark yellowish brown (10YR 4/4) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; 30 percent gravel and 10 percent cobbles; slightly alkaline (pH 7.8); abrupt smooth boundary.

2Bk—38 to 45 inches; very pale brown (10YR 8/2) very gravelly loamy sand, pale

brown (10YR 6/3) moist; massive; slightly hard, friable, nonsticky and slightly plastic; common very fine roots; cemented carbonate coatings on all sides of rock fragments; 40 percent gravel and 10 percent cobbles; violently effervescent; moderately alkaline (pH 8.0); clear wavy boundary.

2Ck1—45 to 56 inches; very gravelly loamy coarse sand, brown (10YR 5/3) moist; single grain; loose, nonsticky and nonplastic; few very fine and fine roots; 40 percent gravel and 5 percent cobbles; slightly effervescent; slightly alkaline (pH 7.8); carbonate coatings on rock fragments; clear wavy boundary.

2Ck2—56 to 65 inches; variegated very gravelly loamy coarse sand, brown (10YR 5/3) moist; single grain; loose, nonsticky and nonplastic; 30 percent gravel and 25 percent cobbles; strongly effervescent; moderately alkaline (pH 8.0); carbonate coatings on rock fragments.

Range in Characteristics

Profile:

Thickness of mollic epipedon—10 to 18 inches

Depth to secondary carbonates—18 to 40 inches

Particle-size control section (average):

Clay content—18 to 25 percent

Rock fragment content—15 to 30 percent

Ap horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bt horizon:

Hue—10YR or 7.5YR

Value—3 to 5 dry, 2 to 4 moist

2Bt and 2Bk horizons:

Value—7 or 8 dry and 5 or 6 moist, or variegated

Chroma—2 or 3 dry or moist

Texture—very gravelly sandy loam or very gravelly loamy sand

Calcium carbonate equivalent—15 to 35 percent

2Ck horizon:

Texture—very gravelly loamy coarse sand or extremely gravelly loamy sand

Rock fragment content—45 to 75 percent

Taxadjunct Features

The Bingham soils in this survey area do not have a strongly contrasting particle-size class because the transition between the particle-size classes is too thick. Also, the mollic epipedon extends to a depth of 27 inches, which is thicker than is allowed by the official series. These differences, however, do not affect the use and management of the soils.

Bloor Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Moderately well drained

Permeability: Slow

Landform: Lake plains and flood plains

Parent material: Kind—alluvium; source—mixed

Slope range: 0 to 2 percent

Elevation: 4,300 to 4,500 feet

Mean annual precipitation: 10 to 12 inches

Mean annual air temperature: 47 to 49 degrees F

Frost-free period: 100 to 120 days

Taxonomic class: Fine-silty, mixed, mesic Durinodic Xeric Natrargids

Typical Pedon

Bloor silt loam in an area of Bloor-Brinnum complex, 0 to 2 percent slopes; about 6 miles south of Malad City, in Oneida County, Idaho; about 1,350 feet east and 1,160 feet north of the southwest corner of sec. 28, T. 15 S., R. 36 E.

- A—0 to 6 inches; light brownish gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist; moderate thick platy structure parting to moderate medium granular; slightly hard, very friable, nonsticky and nonplastic; many coarse and medium and common very fine and fine roots; few medium and common very fine and fine tubular pores; moderately alkaline (pH 8.2); clear wavy boundary.
- E—6 to 12 inches; light gray (10YR 7/2) silt loam, dark grayish brown (10YR 4/2) moist; moderate fine subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; many coarse and medium, common very fine, and few fine roots; few medium and many very fine tubular pores; moderately alkaline (pH 8.4); abrupt smooth boundary.
- Btn—12 to 20 inches; brown (10YR 4/3) silt loam, dark brown (10YR 3/3) moist; weak coarse prismatic structure parting to strong fine subangular blocky; hard, friable, slightly sticky and slightly plastic; common fine and many very fine roots; common very fine and fine tubular pores; 70 percent clay films on faces of peds and lining pores; very strongly alkaline (pH 9.4); abrupt wavy boundary.
- Bkq—20 to 29 inches; very pale brown (10YR 8/2) silt loam, light yellowish brown (10YR 6/4) moist; weak thick platy structure; extremely hard, very firm and brittle, nonsticky and nonplastic; few very fine and fine roots; few medium and many very fine and fine tubular pores; discontinuous weakly cemented matrix; violently effervescent; very strongly alkaline (pH 9.6); clear wavy boundary.
- C1—29 to 39 inches; pale yellow (2.5Y 8/2) very fine sandy loam, light yellowish brown (2.5Y 6/4) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine and fine roots; many very fine and fine tubular pores; common faint yellowish brown (10YR 5/6) masses of iron accumulation; strongly effervescent; very strongly alkaline (pH 9.4); clear wavy boundary.
- C2—39 to 47 inches; light gray (2.5Y 7/2) fine sandy loam, grayish brown (2.5Y 5/2) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine and fine roots; many very fine tubular pores; common distinct yellowish brown (10YR 5/6) masses of iron accumulation; slightly effervescent; strongly alkaline (pH 8.8); clear wavy boundary.
- 2C3—47 to 60 inches; pale yellow (2.5Y 8/2) silt loam, light gray (2.5Y 7/2) moist; massive; hard, firm, slightly sticky and slightly plastic; many distinct yellowish brown (10YR 5/6) masses of iron accumulation; strongly effervescent; very strongly alkaline (pH 9.4).

Range in Characteristics

Profile:

Depth to natric horizon—2 to 15 inches

Depth to discontinuous silica cementation or brittle matrix—15 to 25 inches

Depth to seasonal high water table—60 to 72 inches in January through May

Particle-size control section (average):

Clay content—22 to 27 percent

A horizon:

Value—5 to 7 dry, 3 or 4 moist

Chroma—2 or 3 dry or moist

E horizon:

Value—6 or 7 dry, 3 or 4 moist

Chroma—2 or 3 dry or moist

Btn horizon:

Value—4 to 7 dry, 3 or 4 moist

Chroma—2 or 3 dry or moist

Texture—silt loam, silty clay loam, or clay loam

Sodium adsorption ratio—13 to 30

Bkq horizon:

Hue—10YR or 2.5Y

Value—6 to 8 dry, 4 to 6 moist

Chroma—2 to 4 dry or moist

Texture—silt loam or loam

Calcium carbonate equivalent—1 to 10 percent

C horizon:

Hue—10YR or 2.5Y

Value—7 or 8 dry, 5 or 6 moist

Chroma—2 to 4 dry or moist

Texture—stratified sandy loam to silty clay loam

2C horizon:

Hue—10YR or 2.5Y

Value—7 or 8 dry, 6 or 7 moist

Chroma—2 or 3 dry or moist

Other Features

The Bloor soils in this survey area have less than 27 percent clay in the particle-size control section and they do not have an accumulation of gypsum. These differences, however, do not affect the use and management of the soils.

Bothwell Series*Depth class:* Very deep (greater than 60 inches)*Drainage class:* Well drained*Permeability:* Moderately slow*Landform:* Fan remnants and lake terraces*Parent material:* Kind—alluvium, lacustrine deposits, and loess; source—mixed*Slope range:* 0 to 25 percent*Elevation:* 4,900 to 5,900 feet*Mean annual precipitation:* 14 to 18 inches*Mean annual air temperature:* 42 to 45 degrees F*Frost-free period:* 80 to 100 days*Taxonomic class:* Fine-silty, mixed, frigid Pachic Argixerolls**Typical Pedon**

Bothwell silt loam, 0 to 2 percent slopes; about 16 miles southwest of Malad City, in Oneida County, Idaho; about 2,750 feet east and 100 feet north of the southwest corner of sec. 23, T. 16 S., R. 34 E.

- Ap—0 to 9 inches; brown (10YR 5/3) silt loam, very dark grayish brown (10YR 3/2) moist; moderate very fine granular structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; few very fine tubular pores; slightly alkaline (pH 7.8); abrupt smooth boundary.
- Bt1—9 to 20 inches; grayish brown (10YR 5/2) silt loam, very dark brown (10YR 2/2) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; many very fine roots; many very fine pores; 15 percent faint clay films on faces of peds and lining pores; slightly alkaline (pH 7.6); gradual smooth boundary.
- Bt2—20 to 26 inches; brown (10YR 5/3) silty clay loam, very dark grayish brown (10YR 3/2) moist; moderate very fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; many very fine roots; many very fine and fine irregular pores and few very fine tubular pores; 40 percent distinct clay films on faces of peds and lining pores; slightly alkaline (pH 7.6); gradual smooth boundary.
- Bt3—26 to 45 inches; brown (10YR 5/3) silty clay loam, dark brown (7.5YR 3/2) moist; moderate very fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine roots; common very fine tubular pores; 70 percent faint clay films on faces of peds and lining pores; slightly alkaline (pH 7.8); gradual smooth boundary.
- Bk—45 to 60 inches; pale brown (10YR 6/3) silt loam, brown (7.5YR 4/2) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; strongly effervescent; moderately alkaline (pH 8.0).

Range in Characteristics

Profile:

Thickness of mollic epipedon—20 to 50 inches

Depth to secondary carbonates—44 inches or more

Particle-size control section (average):

Clay content—22 to 27 percent in the upper part and 28 to 34 percent in the lower part

Rock fragment content—0 to 3 percent

Ap horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—1 to 4 dry, 1 to 3 moist

Bt horizon:

Value—5 to 7 dry, 2 to 4 moist

Chroma—2 or 3 dry or moist

Texture—silt loam or silty clay loam

Bk horizon:

Value—5 to 7 dry, 3 or 4 moist

Chroma—2 to 4 dry or moist

Texture—silt loam or silty clay loam

Calcium carbonate equivalent—5 to 15 percent

Brinum Taxadjunct

Depth class: Very deep (greater than 60 inches)

Drainage class: Very poorly drained

Permeability: Moderately slow

Landform: Lake plains, lake terraces, and flood plains

Parent material: Kind—alluvium influenced by loess; source—mixed

Slope range: 0 to 2 percent

Elevation: 4,300 to 4,500 feet

Mean annual precipitation: 11 to 13 inches

Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 100 to 120 days

Taxonomic class: Fine-silty, mixed (calcareous), mesic Aeris Endoaquents

Typical Pedon

Brinnum silt loam in an area of Bloor-Brinnum complex, 0 to 2 percent slopes; about 4 miles south of Malad City, in Oneida County, Idaho; about 360 feet west and 1,400 feet south of the northeast corner of sec. 29, T. 15 S., R. 36 E.; colors in this pedon description are for moist soil unless otherwise noted.

A1—0 to 4 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak medium and coarse granular structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium roots; many very fine, fine, and medium tubular pores; strongly effervescent; very strongly alkaline (pH 9.6); clear smooth boundary.

A2—4 to 9 inches; very dark grayish brown (10YR 3/2) silt loam, light brownish gray (10YR 6/2) dry; weak fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine, fine, and medium roots; many very fine and fine and few medium tubular pores; strongly effervescent; very strongly alkaline (pH 9.6); clear wavy boundary.

Cg1—9 to 21 inches; light brownish gray (10YR 6/2) silt loam, very pale brown (10YR 8/2) dry; massive; hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common fine and medium tubular pores; violently effervescent; very strongly alkaline (pH 9.6); clear wavy boundary.

Cg2—21 to 31 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common fine and medium tubular pores; slightly effervescent; very strongly alkaline (pH 9.4); clear wavy boundary.

Cg3—31 to 46 inches; light brownish gray (2.5Y 6/2) silty clay loam, pale yellow (2.5Y 8/2) dry; massive; hard, friable, moderately sticky and slightly plastic; few very fine and fine roots; common fine and few medium tubular pores; 15 percent distinct light olive brown (2.5Y 5/4) masses of iron accumulation; strongly effervescent; very strongly alkaline (pH 9.2); gradual wavy boundary.

Cg4—46 to 60 inches; light gray (2.5Y 7/2) silty clay loam, pale yellow (2.5Y 8/2) dry; massive; hard, firm, moderately sticky and moderately plastic; few very fine roots; few medium tubular pores; violently effervescent; 80 percent strongly cemented calcium carbonate nodules; strongly alkaline (pH 9.0).

Range in Characteristics

Profile:

Depth to seasonal high water table—6 to 18 inches in September through May

Particle-size control section (average):

Clay content—18 to 27 percent

A horizon:

Value—6 to 8 dry, 3 to 7 moist

Chroma—2 or 3 dry or moist

Sodium adsorption ratio—5 to 15

Cg horizon:

Hue—10YR or 2.5Y

Value—6 to 8 dry, 4 to 7 moist

Chroma—2 or 3 dry or moist
 Texture—silt loam or silty clay loam
 Sodium adsorption ratio—40 to 100

Taxadjunct Features

The Brinnum soils in this survey area have a higher sodium adsorption ratio than is allowed by the official series and the ratio does not decrease significantly with depth. Also, the soils do not have a cambic horizon. These differences, however, do not affect the use and management of the soils.

Broadhead Series

Depth class: Very deep (greater than 60 inches)
Drainage class: Well drained
Permeability: Slow
Landform: Plains and fan remnants
Parent material: Kind—alluvium; source—igneous rock, sandstone, and quartzite
Slope range: 4 to 30 percent
Elevation: 5,000 to 5,900 feet
Mean annual precipitation: 17 to 20 inches
Mean annual air temperature: 42 to 45 degrees F
Frost-free period: 70 to 100 days
Taxonomic class: Fine, montmorillonitic, frigid Pachic Argixerolls

Typical Pedon

Broadhead silt loam in an area of Manila-Broadhead complex, 4 to 12 percent slopes; about 5 miles north of Malad City, in Oneida County, Idaho; about 850 feet north and 125 feet west of the southeast corner of sec. 28, T. 13 S., R. 36 E.

- Ap—0 to 9 inches; dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; moderate fine granular structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine and few fine roots; many fine and very fine tubular and irregular pores; neutral (pH 7.0); clear smooth boundary.
- AB—9 to 15 inches; dark grayish brown (10YR 4/2) silty clay loam, very dark brown (10YR 2/2) moist; weak medium subangular blocky structure parting to moderate medium granular; hard, friable, moderately sticky and moderately plastic; common very fine roots; common fine and very fine tubular pores; neutral (pH 6.8); clear wavy boundary.
- Bt1—15 to 23 inches; brown (10YR 5/3) silty clay, dark brown (10YR 3/3) moist; strong fine subangular blocky structure; very hard, firm, very sticky and very plastic; few very fine roots; common fine and very fine tubular pores; 40 percent faint and few distinct clay films on faces of peds and 15 percent faint clay films lining pores; neutral (pH 6.8); clear wavy boundary.
- Bt2—23 to 36 inches; yellowish brown (10YR 5/4) silty clay, dark yellowish brown (10YR 3/4) moist; moderate medium subangular blocky structure; very hard, firm, very sticky and very plastic; few very fine roots; common very fine tubular pores; 70 percent distinct clay films on faces of peds and 40 percent faint clay films lining pores; 5 percent gravel and 3 percent cobbles; slightly alkaline (pH 7.4); gradual wavy boundary.
- BC—36 to 41 inches; yellowish brown (10YR 5/4) gravelly silty clay, dark yellowish brown (10YR 4/4) moist; weak medium subangular blocky structure; very hard, firm, very sticky and very plastic; 15 percent gravel and 5 percent cobbles; slightly alkaline (pH 7.6); gradual wavy boundary.
- C—41 to 60 inches; very pale brown (10YR 7/3) gravelly clay loam, light gray (10YR

7/2) moist; massive; slightly hard, friable, moderately sticky and moderately plastic; 20 percent gravel and 10 percent cobbles; strongly effervescent; neutral (pH 7.2).

Range in Characteristics

Profile:

Thickness of mollic epipedon—20 to 34 inches
Depth to calcareous material—40 inches or more

Particle-size control section (average):

Clay content—35 to 50 percent
Rock fragment content—0 to 10 percent

Ap and AB horizons:

Hue—7.5YR to 10YR
Value—3 to 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Bt horizon:

Hue—7.5YR or 10YR
Value—4 to 6 dry, 2 to 4 moist
Chroma—2 to 4 dry or moist
Texture—silty clay loam or silty clay

BC horizon:

Hue—7.5YR or 10YR
Value—5 or 6 dry, 4 or 5 moist
Chroma—2 to 4 dry or moist
Texture—gravelly silty clay or silty clay
Rock fragment content—0 to 25 percent

C horizon:

Value—6 or 7 dry, 4 to 7 moist
Chroma—2 or 3 dry or moist
Texture—gravelly clay loam or clay loam
Rock fragment content—0 to 25 percent

Buckboard Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderately slow

Landform: Lake terraces

Parent material: Kind—lacustrine deposits; source—mixed

Slope range: 0 to 2 percent

Elevation: 4,900 to 5,200 feet

Mean annual precipitation: 14 to 18 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 80 to 100 days

Taxonomic class: Fine-loamy, mixed, frigid Pachic Haploxerolls

Typical Pedon

Buckboard loam, 0 to 2 percent slopes; about 15 miles southwest of Malad City, in Oneida County, Idaho; about 2,000 feet west and 2,700 feet north of the southeast corner of sec. 35, T. 15 S., R. 34 E.

Ap—0 to 9 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR

- 3/2) moist; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and common fine roots; many very fine tubular pores; 2 percent gravel; slightly alkaline (pH 7.6); clear smooth boundary.
- A—9 to 15 inches; grayish brown (10YR 5/2) loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; soft, friable, slightly sticky and slightly plastic; common very fine and few fine roots; many very fine tubular pores; 1 percent gravel; slightly alkaline (pH 7.6); clear smooth boundary.
- Bw1—15 to 23 inches; brown (10YR 5/3) loam, dark brown (10YR 3/3) moist; moderate fine prismatic structure parting to moderate medium subangular blocky; hard, friable, slightly sticky and slightly plastic; common very fine roots; common very fine tubular pores; 10 percent hard nodules; 1 percent gravel; slightly alkaline (pH 7.6); abrupt wavy boundary.
- Bw2—23 to 43 inches; light brownish gray (10YR 6/2) loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; very hard, very firm, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; 10 percent hard nodules; moderately alkaline (pH 8.0); clear wavy boundary.
- Bw3—43 to 50 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few very fine roots; few very fine irregular pores; moderately alkaline (pH 8.0); clear wavy boundary.
- Bk1—50 to 59 inches; pale brown (10YR 6/3) loam, brown (10YR 5/3) moist; moderate fine subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few very fine irregular pores; strongly effervescent; few fine threads of secondary carbonates; moderately alkaline (pH 8.0); abrupt smooth boundary.
- Bk2—59 to 65 inches; light gray (10YR 7/2) loam, pale brown (10YR 6/3) moist; weak fine subangular blocky structure; hard, firm, slightly sticky and slightly plastic; 15 percent prominent brown (7.5YR 4/4) masses of iron accumulation; violently effervescent; many medium masses of secondary carbonates; moderately alkaline (pH 8.4).

Range in Characteristics

Profile:

Thickness of mollic epipedon—20 to 30 inches
 Depth to secondary carbonates—44 to 55 inches

Particle-size control section (average):

Clay content—18 to 27 percent

Ap and A horizons:

Value—4 or 5 dry, 2 or 3 moist
 Chroma—2 or 3 dry or moist

Bw horizon:

Value—5 or 6 dry, 3 or 4 moist
 Chroma—2 or 3 dry or moist
 Texture—loam or silt loam

Bk horizon:

Value—6 or 7 dry, 5 or 6 moist
 Chroma—2 or 3 dry or moist
 Texture—loam or silt loam
 Calcium carbonate equivalent—5 to 10 percent

Buist Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Fan remnants, hills, and mountains

Parent material: Kind—alluvium influenced by loess; source—mixed

Slope range: 4 to 30 percent

Elevation: 5,000 to 6,000 feet

Mean annual precipitation: 12 to 16 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 85 to 95 days

Taxonomic class: Loamy-skeletal, mixed, frigid Calcic Haploxerolls

Typical Pedon

Buist gravelly silt loam in an area of Ririe-Buist complex, 4 to 12 percent slopes; about 8 miles north of Holbrook, in Oneida County, Idaho; about 2,100 feet south and 1,500 feet west of the northeast corner of sec. 31, T. 13 S., R. 33 E.

Ap—0 to 7 inches; brown (10YR 5/3) gravelly silt loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure parting to weak fine granular; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; many very fine tubular pores; 15 percent gravel and 1 percent stones; slightly alkaline (pH 7.6); clear wavy boundary.

BA—7 to 15 inches; brown (10YR 5/3) gravelly silt loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; 20 percent gravel and 5 percent cobbles; slightly effervescent; slightly alkaline (pH 7.6); clear wavy boundary.

Bk1—15 to 28 inches; very pale brown (10YR 7/3) very gravelly loam, brown (10YR 5/3) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores; 45 percent gravel; strongly effervescent; 40 percent irregular carbonate threads and masses throughout; moderately alkaline (pH 8.0); abrupt wavy boundary.

Bk2—28 to 43 inches; very pale brown (10YR 7/4) extremely gravelly fine sandy loam, light yellowish brown (10YR 6/4) moist; weak coarse subangular blocky structure; slightly hard, very friable, nonsticky and nonplastic; few very fine roots; few very fine tubular pores; 55 percent gravel and 10 percent cobbles; violently effervescent; 70 percent irregular carbonate threads and masses; moderately alkaline (pH 8.2); abrupt wavy boundary.

Bk3—43 to 60 inches; very pale brown (10YR 7/4) extremely gravelly fine sandy loam, dark yellowish brown (10YR 4/4) moist; single grain; loose, nonsticky and nonplastic; 60 percent gravel and 15 percent cobbles; violently effervescent; 70 percent irregular carbonate threads and masses; moderately alkaline (pH 8.2).

Range in Characteristics

Profile:

Thickness of mollic epipedon—10 to 19 inches

Depth to secondary carbonates—8 to 19 inches

Particle-size control section (average):

Clay content—10 to 18 percent

Rock fragment content—35 to 70 percent

Ap horizon:

Value—3 to 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

BA horizon:

Value—5 or 6 dry, 4 to 6 moist

Chroma—2 to 4 dry or moist

Bk horizon:

Value—6 or 7 dry, 4 to 6 moist

Chroma—3 or 4 dry or moist

Texture—very gravelly loam or extremely gravelly fine sandy loam

Calcium carbonate equivalent—15 to 40 percent

Calpac Series*Depth class:* Very deep (greater than 60 inches)*Drainage class:* Well drained*Permeability:* Moderate*Landform:* Mountains and ridges*Parent material:* Kind—colluvium and alluvium; source—sedimentary rock*Slope range:* 30 to 70 percent*Elevation:* 5,200 to 7,200 feet*Mean annual precipitation:* 20 to 23 inches*Mean annual air temperature:* 42 to 45 degrees F*Frost-free period:* 70 to 90 days*Taxonomic class:* Loamy-skeletal, mixed, frigid Calcic Pachic Haploxerolls***Typical Pedon***

Calpac gravelly silt loam in an area of Ireland-Calpac association, 30 to 60 percent slopes; about 11 miles west of Malad City, in Oneida County, Idaho; about 600 feet west and 800 feet north of the southeast corner of sec. 15, T. 14 S., R. 34 E.

A—0 to 8 inches; dark brown (10YR 3/3) gravelly silt loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure parting to weak fine granular; soft, very friable, slightly sticky and slightly plastic; common very fine to coarse roots; common very fine tubular pores; 15 percent gravel and 5 percent cobbles; neutral (pH 7.1); clear wavy boundary.

AB—8 to 15 inches; dark brown (10YR 3/3) very gravelly silt loam, very dark brown (10YR 2/2) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine to coarse roots; common very fine tubular and vesicular pores; 20 percent gravel and 15 percent cobbles; neutral (pH 7.2); gradual wavy boundary.

Bw—15 to 23 inches; brown (10YR 4/3) extremely cobbly silt loam, dark brown (7.5YR 3/2) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine to coarse roots; common very fine tubular and vesicular pores; 30 percent gravel and 35 percent cobbles; slightly alkaline (pH 7.4); clear wavy boundary.

Bk1—23 to 31 inches; brown (10YR 4/3) extremely cobbly silt loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; 25 percent gravel and 45 percent cobbles; slightly effervescent; few fine masses of carbonate and common coatings of carbonate on underside of rock fragments; slightly alkaline (pH 7.7); clear wavy boundary.

Bk2—31 to 60 inches; brown (10YR 4/3) extremely cobbly silt loam, dark yellowish

brown (10YR 3/4) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; 25 percent gravel and 50 percent cobbles; strongly effervescent; many coatings of carbonate on underside of rock fragments; moderately alkaline (pH 8.1).

Range in Characteristics

Profile:

Thickness of mollic epipedon—21 to 33 inches
Depth to secondary carbonates—23 to 40 inches

Particle-size control section (average):

Clay content—18 to 25 percent
Rock fragment content—35 to 70 percent

A and AB horizons:

Value—3 or 4 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Bw horizon:

Hue—7.5YR or 10YR
Value—3 or 4 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Bk horizon:

Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist
Texture—extremely cobbly silt loam or extremely cobbly loam
Calcium carbonate equivalent—5 to 14 percent

Cedarhill Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Fan remnants and mountains

Parent material: Kind—alluvium and colluvium; source—limestone, quartzite, and sandstone

Slope range: 4 to 55 percent

Elevation: 5,000 to 6,500 feet

Mean annual precipitation: 13 to 17 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 90 to 100 days

Taxonomic class: Loamy-skeletal, mixed, frigid Typic Calcixerolls

Typical Pedon

Cedarhill gravelly silt loam in an area of Ririe-Cedarhill complex, 4 to 12 percent slopes; about 11 miles north and 18 miles west of Malad City, in Oneida County, Idaho; about 2,500 feet east and 1,600 feet north of the southwest corner of sec. 29, T. 12 S., R. 33 E.

Ap—0 to 7 inches; grayish brown (10YR 5/2) gravelly silt loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure parting to weak fine granular; soft, very friable, slightly sticky and slightly plastic; common very fine and few fine and medium roots; common fine and medium

tubular pores; 10 percent fine gravel and 5 percent cobbles; strongly effervescent; slightly alkaline (pH 7.6); clear wavy boundary.

Bk1—7 to 12 inches; grayish brown (10YR 5/2) gravelly loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure parting to weak fine granular; soft, very friable, slightly sticky and slightly plastic; common very fine roots; common very fine and fine tubular pores; 10 percent gravel and 5 percent cobbles; strongly effervescent; slightly alkaline (pH 7.7); clear wavy boundary.

Bk2—12 to 18 inches; light gray (10YR 7/2) very gravelly loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; hard, very friable, nonsticky and nonplastic; common very fine roots; common very fine and few fine and medium tubular pores; 40 percent fine gravel; violently effervescent; 1-millimeter-thick coatings of secondary carbonates on all sides of rock fragments and common fine filaments and masses of secondary carbonates; slightly alkaline (pH 7.8); clear wavy boundary.

Bk3—18 to 27 inches; very pale brown (10YR 8/2) very gravelly loam, light yellowish brown (10YR 6/4) moist; weak fine subangular blocky structure parting to weak fine granular; hard, very friable, nonsticky and nonplastic; few very fine roots; common very fine to medium tubular pores; 45 percent gravel; violently effervescent; 1-millimeter-thick coatings of secondary carbonates on all sides of rock fragments and many fine filaments and masses of secondary carbonates; pockets of weak cementation at a depth of 27 inches; slightly alkaline (pH 7.8); clear wavy boundary.

Bk4—27 to 60 inches; very pale brown (10YR 8/2) extremely cobbly loam, very pale brown (10YR 8/4) moist; weak fine subangular blocky structure parting to weak fine granular; hard, very friable, nonsticky and nonplastic; common very fine vesicular pores; 30 percent gravel, 35 percent cobbles, and 1 percent stones; violently effervescent; 1-millimeter-thick coatings of secondary carbonates on all sides of rock fragments and many fine filaments and masses of secondary carbonates; moderately alkaline (pH 8.0).

Range in Characteristics

Profile:

Thickness of mollic epipedon—8 to 13 inches

Depth to calcic horizon—7 to 13 inches

Particle-size control section (average):

Clay content—10 to 15 percent

Rock fragment content—40 to 70 percent

Ap horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bk1 horizon:

Value—5 to 8 dry, 2 or 3 moist

Chroma—2 or 3 dry, 3 or 4 moist

Texture—gravelly loam or gravelly silt loam

Calcium carbonate equivalent—15 to 35 percent

Bk2, Bk3, and Bk4 horizons:

Value—7 or 8 dry, 4 to 8 moist

Chroma—2 to 4 dry or moist

Texture—very gravelly loam, extremely cobbly loam, or extremely gravelly loam

Calcium carbonate equivalent—15 to 35 percent

Other Features

The Cedarhill soils in this survey area do not have an nonconformable C horizon, which is outside the range for the official series. This difference, however, does not affect the use and management of these soils.

Clayburn Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Mountains

Parent material: Kind—colluvium and alluvium; source—sedimentary rock

Slope range: 20 to 60 percent

Elevation: 6,500 to 7,500 feet

Mean annual precipitation: 20 to 22 inches

Mean annual air temperature: 39 to 42 degrees F

Frost-free period: 50 to 70 days

Taxonomic class: Fine-loamy, mixed Argic Pachic Cryoborolls

Typical Pedon

Clayburn silt loam in an area of Hymas-Northwater-Clayburn association, 20 to 60 percent slopes; about 6 miles south of Malad City, in Oneida County, Idaho; about 500 feet east and 2,700 feet south of the northwest corner of sec. 11, T. 16 S., R. 35 E.; colors in this pedon description are for moist soil unless otherwise noted.

A1—0 to 4 inches; very dark brown (10YR 2/2) silt loam, dark grayish brown (10YR 4/2) dry; weak fine subangular blocky structure parting to weak fine granular; soft, very friable, slightly sticky and slightly plastic; many very fine and common fine to coarse roots; common very fine tubular pores and many very fine vesicular pores; 10 percent gravel; neutral (pH 7.2); clear wavy boundary.

A2—4 to 11 inches; very dark brown (10YR 2/2) loam, dark grayish brown (10YR 4/2) dry; weak very fine, fine, and medium subangular blocky structure; soft, friable, slightly sticky and slightly plastic; many very fine and common fine to coarse roots; common very fine tubular and vesicular pores; 10 percent gravel and 1 percent stones; neutral (pH 7.2); clear wavy boundary.

A3—11 to 21 inches; very dark grayish brown (10YR 3/2) loam, grayish brown (10YR 5/2) dry; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine to coarse roots; common very fine and few fine tubular pores and common very fine vesicular pores; 10 percent gravel, 3 percent cobbles, and 1 percent stones; neutral (pH 7.1); abrupt wavy boundary.

Bt1—21 to 25 inches; brown (7.5YR 4/4) cobbly clay loam, light yellowish brown (10YR 6/4) dry; moderate fine and medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine and coarse and few fine and medium roots; common very fine and few fine tubular pores and common very fine vesicular pores; 5 percent gravel, 10 percent cobbles, and 1 percent stones; neutral (pH 7.0); clear wavy boundary.

Bt2—25 to 39 inches; yellowish brown (10YR 5/4) cobbly clay loam, light yellowish brown (10YR 6/4) dry; moderate fine and medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine and coarse and few fine and medium roots; common very fine and few fine tubular pores and common very fine vesicular pores; 5 percent gravel, 10 percent cobbles, and 1 percent stones; neutral (pH 7.1); clear wavy boundary.

- C1—39 to 47 inches; dark yellowish brown (10YR 4/4) cobbly clay loam, yellowish brown (10YR 5/4) dry; massive; hard, friable, moderately sticky and moderately plastic; few very fine and fine roots; common very fine and few fine tubular pores and common very fine vesicular pores; 10 percent gravel and 15 percent cobbles; neutral (pH 7.2); abrupt wavy boundary.
- C2—47 to 60 inches; dark yellowish brown (10YR 4/4) cobbly clay loam, yellowish brown (10YR 5/4) dry; massive; very hard, friable, moderately sticky and moderately plastic; few very fine and fine roots; common very fine and few fine tubular pores and common very fine vesicular pores; 10 percent gravel and 20 percent cobbles; neutral (pH 7.2).

Range in Characteristics

Profile:

Thickness of mollic epipedon—16 to 25 inches

Depth to argillic horizon—21 to 24 inches

Particle-size control section (average):

Clay content—27 to 33 percent

Rock fragment content—15 to 25 percent

A horizon:

Value—3 to 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bt horizon:

Hue—10YR or 7.5YR

Value—5 or 6 dry, 4 or 5 moist

Chroma—2 to 4 dry or moist

C horizon:

Value—5 or 6 dry, 4 or 5 moist

Chroma—2 to 4 dry or moist

Other Features

The Clayburn soils in this survey area have a xeric moisture regime and support dominantly mountain big sagebrush and bluebunch wheatgrass. The official series has a udic moisture regime but supports similar kinds of vegetation. This difference, however, does not affect the use and management of the soils.

Collinston Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderately slow

Landform: Lake terraces

Parent material: Kind—lacustrine deposits; source—tuff, tuffaceous sandstone, limestone, and conglomerate

Slope range: 0 to 12 percent

Elevation: 4,500 to 5,500 feet

Mean annual precipitation: 14 to 16 inches

Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 100 to 110 days

Taxonomic class: Fine-silty, mixed, mesic Typic Calcixerolls

Typical Pedon

Collinston silt loam in an area of Collinston-Kearns complex, 2 to 12 percent slopes; about 3.5 miles north and 2 miles east of Holbrook, in Oneida County, Idaho; about 2,200 feet east and 200 feet south of the northwest corner of sec. 16, T. 14 S., R. 33 E.

Ap—0 to 8 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; few coarse, common medium, and many fine and very fine roots; few medium and many fine and very fine tubular pores; strongly effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary.

A—8 to 12 inches; brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few coarse and medium and many fine and very fine roots; few medium and many fine and very fine tubular pores; slightly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bk—12 to 20 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 5/3) moist; weak very fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few medium and common fine and very fine roots; few fine and many very fine tubular pores; violently effervescent; strongly alkaline (pH 8.8); clear smooth boundary.

C—20 to 60 inches; very pale brown (10YR 8/3) silt loam, light gray (10YR 7/2) moist; massive; hard, friable, slightly sticky and slightly plastic; few medium and common fine and very fine roots; common fine and very fine tubular pores; violently effervescent; strongly alkaline (pH 8.8).

Range in Characteristics

Profile:

Thickness of mollic epipedon—9 to 20 inches

Depth to secondary carbonates—9 to 20 inches

Particle-size control section (average):

Clay content—18 to 26 percent

Ap and A horizons:

Value—4 or 5 dry, 2 or 3 moist

Chroma—1 to 3 dry or moist

Bk horizon:

Value—6 to 8 dry, 5 to 7 moist

Chroma—1 to 3 dry or moist

Calcium carbonate equivalent—30 to 40 percent

C horizon:

Value—7 or 8 dry, 6 or 7 moist

Chroma—2 or 3 dry or moist

Texture—silt loam or silty clay loam

Copenhagen Series

Depth class: Shallow to bedrock (lithic)

Drainage class: Well drained

Permeability: Moderate

Landform: Mountains and ridges

Parent material: Kind—alluvium with an influence of loess; source—tuff and tuffaceous sedimentary rock

Slope range: 12 to 50 percent

Elevation: 4,900 to 6,200 feet

Mean annual precipitation: 14 to 18 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 70 to 95 days

Taxonomic class: Ashy-skeletal, frigid Lithic Haploxerolls

Typical Pedon

Copenhagen very channery loam in an area of Copenhagen-Lonigan-Manila association, 12 to 50 percent slopes; about 5 miles northeast of Malad City, in Oneida County, Idaho; about 1,000 feet south and 1,300 feet east of the northwest corner of sec. 6, T. 14 S., R. 37 E.

A—0 to 6 inches; gray (10YR 5/1) very channery loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; many very fine tubular pores; 35 percent channers; neutral (pH 7.0); clear smooth boundary.

Bw—6 to 14 inches; gray (10YR 5/1) very channery loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; many very fine tubular pores; 35 percent channers and 5 percent flagstones; neutral (pH 7.2); clear wavy boundary.

R—14 inches; consolidated tuff.

Range in Characteristics

Profile:

Thickness of mollic epipedon—4 to 16 inches

Depth to bedrock—10 to 20 inches

Particle-size control section (average):

Clay content—15 to 25 percent

Rock fragment content—35 to 85 percent

A horizon:

Hue—10YR or 2.5Y

Value—4 or 5 dry, 2 or 3 moist

Chroma—1 or 2 dry or moist

Bw horizon:

Hue—10YR or 2.5Y

Value—4 or 5 dry, 2 or 3 moist

Chroma—1 to 3 dry or moist

Texture—very gravelly loam, very channery loam, or extremely channery loam

Darkbull Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Fan remnants

Parent material: Kind—alluvium; source—mixed

Slope range: 1 to 30 percent

Elevation: 4,400 to 5,000 feet

Mean annual precipitation: 10 to 12 inches

Mean annual air temperature: 45 to 48 degrees F

Frost-free period: 100 to 120 days

Taxonomic class: Loamy-skeletal, mixed, mesic Sodic Xeric Haplocalcids

Typical Pedon

Darkbull gravelly loam in an area of Ecur-Darkbull complex, 1 to 8 percent slopes; about 15 miles west and 7 miles south of Holbrook, in Oneida County, Idaho; about 900 feet east and 900 feet south of the northwest corner of sec. 34, T. 15 S., R. 30 E.

A—0 to 3 inches; light brownish gray (10YR 6/2) gravelly loam, dark brown (10YR 3/3) moist; moderate medium platy structure parting to moderate very thin and thin platy; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine tubular pores; 15 percent gravel; slightly effervescent; moderately alkaline (pH 8.2); clear wavy boundary.

Bw—3 to 10 inches; pale brown (10YR 6/3) gravelly loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; few very fine and fine roots; common very fine tubular pores; 20 percent gravel; strongly effervescent; common coatings of secondary carbonates on underside of rock fragments; strongly alkaline (pH 8.6); clear smooth boundary.

Bk1—10 to 43 inches; pale brown (10YR 6/3) very gravelly sandy loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few very fine tubular pores; 40 percent gravel; violently effervescent; common coatings of secondary carbonates on underside of rock fragments; strongly alkaline (pH 8.8); clear smooth boundary.

Bk2—43 to 60 inches; extremely gravelly sandy loam with variegated colors; massive; 80 percent gravel; violently effervescent; common coatings of secondary carbonates on underside of rock fragments; strongly alkaline (pH 8.8).

Range in Characteristics

Profile:

Depth to calcic horizon—6 to 10 inches

Particle-size control section (average):

Clay content—6 to 15 percent

Rock fragment content—35 to 70 percent

A horizon:

Value—6 or 7 dry, 3 or 4 moist

Chroma—2 or 3 dry or moist

Bw horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 or 3 dry or moist

Bk horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 or 3 dry or moist

Texture—very gravelly sandy loam and extremely gravelly sandy loam

Calcium carbonate equivalent—10 to 25 percent

Sodium adsorption ratio—10 to 30 in the upper part and 5 to 13 in the lower part

Other Features

The Darkbull soils in this survey area are shallower to the very gravelly layer than is the official series and they do not have a 2C horizon. Also, the gravel content in the

Bk2 horizon is higher than that of the official series and the sodium adsorption ratio in the lower part of the profile is lower than that of the official series. These differences, however, do not affect the use and management of these soils.

DeJarnet Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Lake terraces

Parent material: Kind—alluvium and reworked lacustrine deposits; source—quartzite, sandstone, and limestone

Slope range: 0 to 4 percent

Elevation: 4,900 to 5,100 feet

Mean annual precipitation: 12 to 14 inches

Mean annual air temperature: 47 to 49 degrees F

Frost-free period: 120 to 130 days

Taxonomic class: Loamy-skeletal, mixed, mesic Calcic Pachic Haploxerolls

Typical Pedon

DeJarnet gravelly silt loam in an area of DeJarnet gravelly silt loam, 0 to 4 percent slopes; about 4 miles south of Juniper, in Oneida County, Idaho; about 600 feet east and 2,400 feet north of the southwest corner of sec. 21, T. 15 S., R. 30 E.

- A1—0 to 3 inches; grayish brown (10YR 5/2) gravelly silt loam, very dark grayish brown (10YR 3/2) moist; weak thick platy structure parting to weak very thin platy; soft, very friable, slightly sticky and slightly plastic; many very fine roots; common very fine irregular and vesicular pores and few very fine tubular pores; 20 percent gravel; slightly alkaline (pH 7.5); abrupt smooth boundary.
- A2—3 to 9 inches; grayish brown (10YR 5/2) gravelly silt loam, very dark grayish brown (10YR 3/2) moist; moderate coarse subangular blocky structure parting to weak fine and medium subangular blocky; slightly hard, friable, moderately sticky and slightly plastic; common very fine roots; common very fine tubular and irregular pores; 15 percent gravel; slightly alkaline (pH 7.7); abrupt wavy boundary.
- AB—9 to 16 inches; grayish brown (10YR 5/2) gravelly silt loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine roots; common very fine tubular and irregular pores and few fine tubular pores; 20 percent gravel; slightly alkaline (pH 7.6); abrupt wavy boundary.
- Bw—16 to 27 inches; brown (10YR 5/3) gravelly silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine roots; many very fine and few fine tubular pores and common very fine irregular pores; 30 percent gravel; slightly alkaline (pH 7.8); clear wavy boundary.
- 2Bk1—27 to 41 inches; pale brown (10YR 6/3) very gravelly loam, brown (10YR 4/3) moist; weak fine and medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few very fine roots; many very fine irregular pores and common fine tubular pores; 35 percent gravel and 15 percent cobbles; strongly effervescent; coatings of secondary carbonates on rock fragments; moderately alkaline (pH 8.4); abrupt wavy boundary.
- 2Bk2—41 to 62 inches; light gray (10YR 7/2) extremely gravelly loamy fine sand, pale brown (10YR 6/3) moist; single grain; loose, nonsticky and nonplastic; many very fine interstitial pores; 45 percent gravel and 25 percent cobbles; violently

effervescent; coatings of secondary carbonates on rock fragments; strongly alkaline (pH 8.5).

Range in Characteristics

Profile:

Thickness of mollic epipedon—20 to 36 inches

Depth to secondary carbonates—20 to 36 inches

Particle-size control section (average):

Clay content—18 to 25 percent

Rock fragment content—35 to 60 percent

A and AB horizons:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bw horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

2Bk horizon:

Hue—10YR or 7.5YR

Value—6 to 8 dry, 3 to 6 moist

Chroma—2 to 4 dry or moist

Calcium carbonate equivalent—5 to 25 percent

Ecur Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderately rapid

Landform: Lake terraces and fan remnants

Parent material: Kind—alluvium and lacustrine deposits with an influence of loess;
source—sedimentary rock

Slope range: 0 to 30 percent

Elevation: 4,400 to 5,000 feet

Mean annual precipitation: 11 to 13 inches

Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 100 to 110 days

Taxonomic class: Coarse-loamy, mixed, mesic Sodic Xeric Haplocalcids

Typical Pedon

Ecur fine sandy loam, 0 to 4 percent slopes; about 5 miles south of Juniper, in Oneida County, Idaho; about 2,640 feet south and 450 feet west of the northeast corner of sec. 33, T. 15 S., R. 30 E.

A1—0 to 2 inches; light brownish gray (10YR 6/2) fine sandy loam, dark grayish brown (10YR 4/2) moist; moderate very thick platy structure; soft, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine vesicular pores and common very fine tubular pores; 4 percent fine gravel; slightly effervescent; moderately alkaline (pH 8.1); abrupt smooth boundary.

A2—2 to 6 inches; light brownish gray (10YR 6/2) fine sandy loam, dark grayish brown (10YR 4/2) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots and few fine roots; common very fine tubular pores; 4 percent fine gravel; slightly effervescent; moderately alkaline (pH 8.2); abrupt smooth boundary.

- Bw—6 to 15 inches; light brownish gray (10YR 6/2) fine sandy loam, grayish brown (10YR 5/2) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and medium and few fine roots; common very fine tubular pores; 5 percent gravel; strongly effervescent; moderately alkaline (pH 8.2); 5 to 10 percent rounded nodules; abrupt wavy boundary.
- Bkn1—15 to 27 inches; light gray (2.5Y 7/2) fine sandy loam, grayish brown (2.5Y 5/2) moist; massive; hard, firm, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; 5 percent gravel; violently effervescent; few fine very pale brown (10YR 8/2) threads of secondary carbonates, light gray (10YR 7/2) moist; strongly alkaline (pH 8.6); abrupt wavy boundary.
- Bkn2—27 to 37 inches; light gray (2.5Y 7/2) fine sandy loam, grayish brown (2.5Y 5/2) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine and fine roots; few very fine tubular pores; 5 percent gravel; violently effervescent; strongly alkaline (pH 8.6); clear wavy boundary.
- Cn1—37 to 44 inches; light gray (2.5Y 7/2) loamy fine sand, grayish brown (2.5Y 5/2) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine and fine and common medium roots; few very fine tubular pores; 5 percent gravel; 15 percent rounded nodules; strongly effervescent; strongly alkaline (pH 8.5); clear wavy boundary.
- Cn2—44 to 49 inches; pale yellow (2.5Y 8/2) gravelly loamy fine sand, grayish brown (2.5Y 5/2) moist; massive; soft, very friable, nonsticky and nonplastic; few very fine and fine and common medium roots; few very fine tubular pores; 20 percent gravel; strongly effervescent; strongly alkaline (pH 8.6); 15 percent rounded nodules; clear wavy boundary.
- Cn3—49 to 60 inches; pale yellow (2.5Y 8/2) loamy fine sand, light brownish gray (2.5Y 6/2) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine roots; few very fine tubular pores; 2 percent gravel; strongly effervescent; strongly alkaline (pH 8.6).

Range in Characteristics

Profile:

Depth to calcic horizon—10 to 30 inches

Particle-size control section (average):

Clay content—10 to 15 percent

Rock fragment content—0 to 10 percent gravel

A horizon:

Value—3 or 4 moist

Bw horizon:

Value—4 or 5 moist

Chroma—2 or 3 dry or moist

Bkn horizon:

Hue—10YR or 2.5Y

Value—5 or 6 moist

Chroma—2 or 3 dry or moist

Texture—fine sandy loam or loam

Sodium adsorption ratio—13 to 30

Cn horizon:

Hue—10YR or 2.5Y

Value—7 or 8 dry, 5 or 6 moist

Chroma—2 or 3 dry or moist

Texture—loamy fine sand or gravelly loamy fine sand

Sodium adsorption ratio—13 to 30

Elevator Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Moderately well drained

Permeability: Slow

Landform: Lake terraces

Parent material: Kind—lacustrine deposits; source—limestone, quartzite, sandstone, and tuff

Slope range: 0 to 12 percent

Elevation: 4,900 to 5,200 feet

Mean annual precipitation: 14 to 18 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 80 to 100 days

Taxonomic class: Fine-silty, mixed, frigid Calcic Argixerolls

Typical Pedon

Elevator silt loam, 0 to 4 percent slopes; about 17 miles southwest of Malad City, in Oneida County, Idaho; about 1,300 feet north and 100 feet west of the southeast corner of sec. 16, T. 16 S., R. 34 E.

Ap—0 to 10 inches; brown (10YR 5/3) silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; hard, friable, moderately sticky and moderately plastic; common very fine roots; many very fine tubular pores; slightly alkaline (pH 7.6); abrupt smooth boundary.

Bt1—10 to 16 inches; brown (10YR 5/3) silty clay loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine roots; many very fine tubular pores; 15 percent distinct clay films on faces of peds and lining pores; slightly alkaline (pH 7.6); clear smooth boundary.

Bt2—16 to 27 inches; pale brown (10YR 6/3) silty clay loam, brown (10YR 5/3) moist; weak fine subangular blocky structure; very hard, firm, moderately sticky and moderately plastic; few very fine roots; common very fine tubular pores; 70 percent distinct clay films on faces of peds and lining pores; slightly alkaline (pH 7.8); clear smooth boundary.

Btk—27 to 32 inches; pale brown (10YR 6/3) silty clay loam, brown (10YR 5/3) moist; moderate fine subangular blocky structure; very hard, very firm, moderately sticky and moderately plastic; few very fine roots; common very fine irregular pores; few fine prominent red (2.5YR 5/6) relict masses of iron accumulation; 70 percent distinct clay films on faces of peds and lining pores; slightly effervescent; common fine and medium masses of secondary carbonates; moderately alkaline (pH 8.0); abrupt smooth boundary.

Bk1—32 to 45 inches; light gray (10YR 7/2) silty clay loam, brown (10YR 5/3) moist; strong fine angular blocky structure; extremely hard, extremely firm, moderately sticky and moderately plastic; few very fine roots; few very fine irregular pores; many fine and medium prominent red (2.5YR 5/6) relict masses of iron accumulation; common fine organic stains on faces of peds; strongly effervescent; many fine and medium masses of secondary carbonates; 20 percent calcium carbonate equivalent; moderately alkaline (pH 8.2); clear wavy boundary.

Bk2—45 to 60 inches; light gray (10YR 7/2) silty clay loam, brown (10YR 5/3) moist;

strong fine angular blocky structure; extremely hard, extremely firm, moderately sticky and moderately plastic; few very fine irregular pores; few fine and medium prominent red (2.5YR 5/6) relict masses of iron accumulation; few organic stains on faces of peds; violently effervescent; many fine and medium masses of secondary carbonates; 25 percent calcium carbonate equivalent; moderately alkaline (pH 8.4).

Range in Characteristics

Profile:

Thickness of mollic epipedon—11 to 19 inches

Depth to secondary carbonates—18 to 38 inches

Depth to seasonal high water table—60 to 72 inches in March through May (relict redoximorphic features not related to active water table)

Particle-size control section (average):

Clay content—28 to 35 percent

Ap horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bt horizon:

Value—5 or 6 dry, 3 to 5 moist

Chroma—2 to 4 dry or moist

Btk horizon:

Value—5 or 6 dry, 4 or 5 moist

Chroma—2 to 4 dry or moist

Bk horizon:

Value—6 to 8 dry, 5 or 6 moist

Chroma—1 to 3 dry or moist

Calcium carbonate equivalent—15 to 35 percent

Freedom Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Lake terraces

Parent material: Kind—lacustrine deposits; source—sedimentary rock

Slope range: 0 to 4 percent

Elevation: 4,300 to 4,600 feet

Mean annual precipitation: 8 to 12 inches

Mean annual air temperature: 46 to 49 degrees F

Frost-free period: 100 to 110 days

Taxonomic class: Fine-silty, mixed, mesic Xeric Haplocalcids

Typical Pedon

Freedom silt loam in an area of Mellor-Freedom complex, 0 to 2 percent slopes; about 200 feet north of the Utah State line and 4 miles west of Interstate Highway 84, in Oneida County, Idaho; about 500 feet east and 200 feet north of the southwest corner of sec. 27, T. 16 S., R. 30 E.

A1—0 to 4 inches; light brownish gray (10YR 6/2) silt loam, brown (10YR 4/3) moist; weak very thick platy structure parting to weak very fine and fine granular; soft,

very friable, slightly sticky and slightly plastic; common very fine roots; many very fine vesicular pores; slightly effervescent; moderately alkaline (pH 8.1); abrupt smooth boundary.

A2—4 to 9 inches; light brownish gray (10YR 6/2) silt loam, brown (10YR 4/3) moist; weak fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine and medium roots; many very fine tubular pores and few very fine vesicular pores; slightly effervescent; moderately alkaline (pH 7.9); abrupt wavy boundary.

Bw—9 to 13 inches; light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine roots; many very fine tubular pores and few very fine vesicular pores; strongly effervescent; moderately alkaline (pH 8.3); abrupt wavy boundary.

Bk1—13 to 19 inches; light gray (10YR 7/2) silt loam, pale brown (10YR 6/3) moist; weak fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine roots; common very fine tubular pores; violently effervescent; strongly alkaline (pH 8.8); clear wavy boundary.

Bk2—19 to 34 inches; light gray (10YR 7/2) silt loam, grayish brown (10YR 5/2) moist; weak fine and medium subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; few very fine roots; few very fine tubular pores; violently effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

C1—34 to 43 inches; light gray (10YR 7/2) silt loam, grayish brown (10YR 5/2) moist; massive; hard, firm, moderately sticky and moderately plastic; few very fine roots; few very fine tubular pores; strongly effervescent; strongly alkaline (pH 8.5); clear wavy boundary.

C2—43 to 60 inches; light gray (2.5Y 7/2) silt loam, grayish brown (2.5Y 5/2) moist; massive; hard, firm, moderately sticky and moderately plastic; few very fine tubular pores; strongly effervescent; strongly alkaline (pH 8.5).

Range in Characteristics

Profile:

Depth to calcic horizon—13 to 22 inches

Particle-size control section (average):

Clay content—19 to 24 percent

A horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 or 3 dry or moist

Bw horizon:

Value—6 or 7 dry, 4 to 6 moist

Chroma—2 or 3 dry or moist

Bk horizon:

Value—6 to 8 dry, 4 to 6 moist

Chroma—2 to 4 dry or moist

Calcium carbonate equivalent—15 to 40 percent

C horizon:

Hue—10YR or 2.5Y

Value—5 to 8 dry, 4 to 6 moist

Chroma—2 to 4 dry or moist

Texture—silt loam or silty clay loam

Other Features

The Freedom soils in this survey area have a thin Bw horizon, which is not typical for the series. This difference, however, does not affect the use and management of the soils.

Fridlo Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Moderately well drained

Permeability: Slow

Landform: Lake terraces

Parent material: Kind—lacustrine deposits; source—mixed

Slope range: 0 to 2 percent

Elevation: 4,300 to 4,500 feet

Mean annual precipitation: 11 to 13 inches

Mean annual air temperature: 47 to 49 degrees F

Frost-free period: 120 to 130 days

Taxonomic class: Fine-silty, mixed, mesic Typic Natrixerolls

Typical Pedon

Fridlo silt loam, 0 to 2 percent slopes; about 5 miles south of Malad City, in Oneida County, Idaho; about 900 feet west and 2,900 feet north of the southwest corner of sec. 22, T. 16 S., R. 36 E.

A1—0 to 3 inches; dark grayish brown (10YR 4/2) silt loam, very dark gray (10YR 3/1) moist; weak fine subangular blocky structure parting to strong medium granular; hard, friable, moderately sticky and moderately plastic; many very fine and fine roots; common fine tubular pores; slightly effervescent; moderately alkaline (pH 8.2); clear wavy boundary.

A2—3 to 7 inches; grayish brown (10YR 5/2) silt loam, very dark gray (10YR 3/1) moist; moderate fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; many very fine and few fine roots; common very fine tubular pores; slightly effervescent; moderately alkaline (pH 8.3); gradual wavy boundary.

Btn1—7 to 16 inches; grayish brown (10YR 5/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine and fine roots; few very fine tubular pores; 15 percent faint clay films on faces of peds and lining pores; slightly effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

Btn2—16 to 24 inches; pale brown (10YR 6/3) silty clay loam, dark grayish brown (10YR 4/2) moist; moderate medium prismatic structure parting to weak medium subangular blocky; hard, firm, moderately sticky and moderately plastic; few fine roots; few fine tubular pores; 40 percent distinct clay films on faces of peds and 70 percent prominent clay films lining pores; slightly effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

Bk—24 to 30 inches; very pale brown (10YR 7/3) silty clay loam, brown (10YR 4/3) moist; weak medium prismatic structure parting to weak fine subangular blocky; hard, firm, moderately sticky and moderately plastic; few very fine roots; few very fine tubular pores; violently effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary.

Ck—30 to 39 inches; light gray (10YR 7/2) silty clay loam, brown (10YR 5/3) moist; weak fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few very fine roots; few very fine tubular pores; few organic

stains in pores; few faint strong brown (7.5YR 5/6) masses of iron accumulation; strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary.
 C—39 to 60 inches; white (10YR 8/1) silt loam, light brownish gray (10YR 6/2) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few distinct olive gray (5Y 5/2) zones of iron depletion; few manganese concretions; all faces glisten with moisture; violently effervescent; moderately alkaline (pH 8.2).

Range in Characteristics

Profile:

Thickness of mollic epipedon—14 to 19 inches

Depth to calcic horizon—20 to 35 inches

Depth to seasonal high water table—39 to 72 inches in April through June

Particle-size control section (average):

Clay content—27 to 32 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—1 to 3 dry or moist

B_{tn} horizon:

Chroma—2 or 3 dry or moist

Value—5 or 6 dry, 3 to 5 moist

Sodium adsorption ratio—15 to 25

B_k and C_k horizons:

Hue—10YR or 2.5Y

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 or 3 dry or moist

Calcium carbonate equivalent—15 to 35 percent

C horizon:

Hue—10YR or 2.5Y

Value—7 or 8 dry, 5 or 6 moist

Chroma—1 to 3 dry or moist

Goosenawt Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderately slow

Landform: Flood plains

Parent material: Kind—alluvium over lacustrine deposits; source—mixed

Slope range: 0 to 2 percent

Elevation: 4,400 to 5,000 feet

Mean annual precipitation: 13 to 16 inches

Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 110 to 130 days

Taxonomic class: Fine-loamy, mixed, mesic Cumulic Haploxerolls

Typical Pedon

Goosenawt gravelly loam, 0 to 2 percent slopes; about 2 miles north and 1 mile east of Malad City, in Oneida County, Idaho; about 1,200 feet west and 300 feet south of the northeast corner of sec. 10, T. 14 S., R. 36 E.

A1—0 to 3 inches; gray (10YR 5/1) gravelly loam, very dark grayish brown (10YR 3/2)

moist; weak fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine, common fine, and few medium roots; many very fine and fine tubular pores; 1- to 2-centimeter-thick gravelly lens; 15 percent gravel; slightly alkaline (pH 7.8); clear smooth boundary.

A2—3 to 13 inches; dark gray (10YR 4/1) gravelly loam, very dark gray (10YR 3/1) moist; moderate fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and common fine roots; many very fine and fine tubular pores; 2-centimeter-thick silt loam stratum that is light brownish gray (10YR 6/2) moist and is at top of horizon; 20 percent gravel; slightly alkaline (pH 7.8); abrupt smooth boundary.

A3—13 to 24 inches; gray (10YR 5/1) gravelly loam, very dark gray (10YR 3/1) moist; weak medium granular structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common fine tubular pores; 2.5-centimeter-thick discontinuous laminated fine sandy loam lens that is dark grayish brown (10YR 4/2) moist and is at a depth of about 23 inches; 1- to 2-centimeter-thick gravelly lens; 25 percent gravel; slightly alkaline (pH 7.6); abrupt smooth boundary.

2Ab1—24 to 42 inches; very dark gray (10YR 3/1) clay loam, black (10YR 2/1) moist; weak coarse subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine to medium roots; common fine tubular pores; 1- to 2-centimeter-thick gravelly lens; 5 percent gravel; slightly alkaline (pH 7.4); clear smooth boundary.

2Ab2—42 to 58 inches; dark gray (10YR 4/1) clay loam, very dark gray (10YR 3/1) moist; weak fine subangular blocky structure parting to moderate medium granular structure; hard, friable, moderately sticky and moderately plastic; few very fine and fine and common medium roots; common medium tubular pores; 1- to 2-centimeter-thick gravelly lens; 5 percent gravel; slightly alkaline (pH 7.4); abrupt smooth boundary.

2Bkb1—58 to 64 inches; light brownish gray (10YR 6/2) silt loam, olive brown (2.5Y 4/4) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine, fine, and medium roots; few fine tubular pores; 1- to 2-centimeter-thick gravelly lens; 5 percent gravel; strongly effervescent; many threads and masses of secondary carbonates; slightly alkaline (pH 7.4); clear smooth boundary.

2Bkb2—64 to 74 inches; pale brown (10YR 6/3) loam, dark grayish brown (2.5Y 4/2) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine and fine and common medium roots; common fine tubular pores; 1- to 2-centimeter-thick gravelly lens; 10 percent gravel; slightly effervescent; slightly alkaline (pH 7.4).

Range in Characteristics

Profile:

Thickness of mollic epipedon—32 to 60 inches

Depth to buried Bk horizon—35 to 65 inches

Particle-size control section (average):

Clay content—20 to 30 percent

Rock fragment content—5 to 20 percent

A horizon:

Value—4 or 5 dry

Chroma—1 or 2 dry or moist

2Ab horizon:

Value—3 or 4 dry, 2 or 3 moist

*2Bkb horizon:**Hue—10YR or 2.5Y**Chroma—2 to 4 dry or moist**Texture—silt loam or loam**Calcium carbonate equivalent—0 to 5 percent***Hades Series***Depth class: Very deep (greater than 60 inches)**Drainage class: Well drained**Permeability: Moderately slow**Landform: Fan remnants and mountains**Parent material: Kind—alluvium and colluvium; source—sandstone, shale, and quartzite influenced by loess**Slope range: 4 to 50 percent**Elevation: 4,900 to 6,500 feet**Mean annual precipitation: 15 to 20 inches**Mean annual air temperature: 42 to 45 degrees F**Frost-free period: 75 to 90 days**Taxonomic class: Fine-loamy, mixed, frigid Pachic Argixerolls****Typical Pedon***

Hades silt loam in an area of Povey-Hades-Hondoho association, 10 to 50 percent slopes; about 3 miles west and 12 miles north of Daniels Reservoir, in Oneida County, Idaho; about 1,000 feet west and 1,000 feet south of the northeast corner of sec. 4, T. 11 S., R. 34 E.

- A1—0 to 5 inches; dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; weak medium subangular blocky structure parting to weak fine granular; soft, very friable, slightly sticky and slightly plastic; many very fine and common fine, medium, and coarse roots; many very fine irregular pores and common very fine tubular pores; 5 percent gravel; neutral (pH 7.3); clear wavy boundary.
- A2—5 to 9 inches; dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine and common fine to coarse roots; common very fine irregular pores and few fine tubular pores; 10 percent gravel; neutral (pH 7.3); clear wavy boundary.
- AB—9 to 12 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine to coarse roots; common very fine tubular and irregular pores; 10 percent gravel; neutral (pH 7.3); clear wavy boundary.
- Bt1—12 to 20 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine, medium, and coarse and few fine roots; common very fine and fine tubular pores and few very fine irregular pores; 15 percent faint clay films on faces of peds and lining pores; 10 percent gravel; neutral (pH 7.3); clear wavy boundary.
- Bt2—20 to 32 inches; brown (7.5YR 5/4) silty clay loam, brown (7.5YR 4/4) moist; moderate medium and coarse angular blocky structure; very hard, firm, moderately sticky and moderately plastic; common very fine and medium and few fine and coarse roots; common very fine and few fine tubular pores; many

decayed root mats and organic stains on faces of peds; 70 percent distinct clay films on faces of peds and lining pores; 5 percent gravel; neutral (pH 7.2); gradual wavy boundary.

Bt3—32 to 42 inches; brown (7.5YR 5/4) silty clay loam, brown (7.5YR 4/4) moist; moderate medium and coarse angular blocky structure; very hard, firm, moderately sticky and moderately plastic; few fine and coarse and common very fine and medium roots; common very fine and few fine tubular pores; 70 percent distinct clay films on faces of peds and lining pores; 5 percent gravel; neutral (pH 7.2); abrupt wavy boundary.

Bt4—42 to 60 inches; yellowish brown (10YR 5/4) gravelly silty clay loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine to coarse roots; common very fine and few fine tubular pores; 15 percent faint clay films on faces of peds and lining pores; 15 percent gravel and 5 percent cobbles; neutral (pH 7.2).

Range in Characteristics

Profile:

Thickness of mollic epipedon—20 to 50 inches

Depth to calcareous material—54 inches or more

Particle-size control section (average):

Clay content—25 to 35 percent

A horizon:

Value—3 to 5 dry, 2 or 3 moist

Chroma—2 to 4 dry, 1 to 3 moist

Bt horizon:

Hue—10YR or 7.5YR

Value—4 to 7 dry, 2 to 5 moist

Chroma—2 to 4 dry or moist

Texture—silt loam or silty clay loam in the upper part and gravelly silty clay loam below a depth of 40 inches

Rock fragment content—0 to 30 percent

Hans Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Slow

Landform: Lake terraces

Parent material: Kind—lacustrine deposits; source—mixed

Slope range: 0 to 2 percent

Elevation: 4,400 to 4,900 feet

Mean annual precipitation: 13 to 15 inches

Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 120 to 130 days

Taxonomic class: Fine-silty, mixed, mesic Calcixerollic Xerochrepts

Typical Pedon

Hans silt loam, 0 to 2 percent slopes; about 2 miles west and 4 miles south of Malad City, in Oneida County, Idaho; about 2,520 feet north and 120 feet east of the southwest corner of sec. 6, T. 15 S., R. 36 E.

- Ap—0 to 10 inches; light brownish gray (2.5Y 6/2) silt loam, dark brown (10YR 3/3) moist; strong fine granular structure; slightly hard, very friable, moderately sticky and moderately plastic; many very fine and common fine roots; many very fine irregular and tubular pores; slightly alkaline (pH 7.6); clear smooth boundary.
- AB—10 to 18 inches; light brownish gray (2.5Y 6/2) silty clay loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; hard, very friable, moderately sticky and moderately plastic; common very fine roots; many very fine irregular and tubular pores; slightly alkaline (pH 7.6); clear smooth boundary.
- Bw—18 to 26 inches; light brownish gray (2.5Y 6/2) silty clay loam, brown (10YR 4/3) moist; strong fine and medium subangular blocky structure; hard, friable, very sticky and moderately plastic; few very fine roots; common very fine irregular pores and few very fine tubular pores; slightly alkaline (pH 7.6); clear smooth boundary.
- Bk1—26 to 31 inches; light brownish gray (2.5Y 6/2) silty clay loam, brown (10YR 5/3) moist; moderate medium subangular blocky structure; hard, firm, very sticky and moderately plastic; few very fine roots; few very fine and fine tubular and irregular pores; many coarse distinct light brownish gray (10YR 6/2) zones of iron depletion; strongly effervescent; few fine masses of secondary carbonates; moderately alkaline (pH 8.2); abrupt smooth boundary.
- Bk2—31 to 41 inches; light gray (2.5Y 7/2) silty clay loam, pale brown (10YR 6/3) moist; moderate fine subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine roots; few very fine tubular pores; few fine distinct strong brown (7.5YR 5/6) masses of iron accumulation; violently effervescent; few fine masses of secondary carbonates; moderately alkaline (pH 8.0); clear smooth boundary.
- Bk3—41 to 60 inches; light gray (2.5Y 7/2) silty clay loam, light brownish gray (10YR 6/2) moist; strong fine subangular blocky structure; hard, very firm, moderately sticky and moderately plastic; few very fine roots; few very fine tubular pores; many coarse prominent strong brown (7.5YR 5/6) masses of iron accumulation; violently effervescent; many fine masses of secondary carbonates; moderately alkaline (pH 8.0).

Range in Characteristics

Profile:

Depth to calcic horizon—10 to 30 inches

Particle-size control section (average):

Clay content—27 to 34 percent

Ap horizon:

Hue—2.5Y or 10YR

Value—5 or 6 dry, 3 or 4 moist

Chroma—2 or 3 dry or moist

AB and Bw horizons:

Hue—2.5Y or 10YR

Value—6 or 7 dry, 3 to 5 moist

Chroma—2 or 3 dry or moist

Bk horizon:

Hue—2.5Y or 10YR

Value—6 or 7 dry, 4 to 6 moist

Chroma—2 or 3 dry or moist

Calcium carbonate equivalent—15 to 25 percent

Highcreek Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Lake terraces and fan remnants

Parent material: Kind—lacustrine deposits and alluvium; source—mixed

Slope range: 4 to 25 percent

Elevation: 4,500 to 5,500 feet

Mean annual precipitation: 12 to 14 inches

Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 100 to 120 days

Taxonomic class: Fine-loamy, mixed, mesic Calcic Haploxerolls

Typical Pedon

Highcreek silt loam in an area of Highcreek-Sterling complex, 4 to 12 percent slopes; about 1.5 miles southwest of Woodruff, in Oneida County, Idaho; about 300 feet north and 50 feet east of the southwest corner of sec. 28, T. 16 S., R. 36 E.

Ap—0 to 7 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure parting to weak fine granular; soft, very friable, slightly sticky and slightly plastic; many very fine, common fine, and few medium and coarse roots; many fine and very fine irregular pores; 10 percent gravel and 1 percent cobbles; slightly alkaline (pH 7.5); clear wavy boundary.

A—7 to 16 inches; brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; many very fine tubular pores; 10 percent gravel and 2 percent cobbles; slightly effervescent; 7 percent calcium carbonate equivalent; moderately alkaline (pH 8.0); clear wavy boundary.

Bk1—16 to 26 inches; light brownish gray (10YR 6/2) silt loam, brown (10YR 4/3) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; many very fine tubular pores; 10 percent gravel and 2 percent cobbles; strongly effervescent; few coatings of secondary carbonates on underside of rock fragments and common medium threads of secondary carbonates in matrix; 10 percent calcium carbonate equivalent; moderately alkaline (pH 8.1); abrupt smooth boundary.

Bk2—26 to 38 inches; very pale brown (10YR 7/3) gravelly loam, brown (10YR 5/3) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; common fine tubular pores; 15 percent gravel and 2 percent cobbles; violently effervescent; many coatings of secondary carbonates on rock fragments and many fine and medium threads of secondary carbonates in matrix; 25 percent calcium carbonate equivalent; moderately alkaline (pH 8.1); clear wavy boundary.

Bk3—38 to 49 inches; pale brown (10YR 6/3) gravelly loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; common fine tubular pores; 15 percent gravel and 3 percent cobbles; strongly effervescent; common coatings of secondary carbonates on rock fragments and few fine threads of secondary carbonates in matrix; 11 percent calcium carbonate equivalent; moderately alkaline (pH 8.1); abrupt wavy boundary.

Bk4—49 to 66 inches; very pale brown (10YR 7/3) gravelly loam, brown (10YR 5/3)

moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; 15 percent gravel and 5 percent cobbles; violently effervescent; common coatings of secondary carbonates on rock fragments and many fine and medium threads of secondary carbonates in matrix; 30 percent calcium carbonate equivalent; moderately alkaline (pH 8.2).

Range in Characteristics

Profile:

Thickness of mollic epipedon—10 to 18 inches
Depth to secondary carbonates—7 to 26 inches

Particle-size control section (average):

Clay content—18 to 27 percent
Rock fragment content—5 to 15 percent

Ap and A horizons:

Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Bk horizon:

Value—6 or 7 dry, 4 or 5 moist
Chroma—2 to 4 dry or moist
Texture—silt loam or gravelly loam
Rock fragment content—5 to 25 percent
Calcium carbonate equivalent—5 to 30 percent

Hillfield Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Dissected lake terraces

Parent material: Kind—lacustrine deposits; source—mixed

Slope range: 4 to 50 percent

Elevation: 4,400 to 4,800 feet

Mean annual precipitation: 14 to 16 inches

Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 110 to 120 days

Taxonomic class: Coarse-silty, mixed, mesic Calcixerollic Xerochrepts

Typical Pedon

Hillfield silt loam in an area of Hillfield-Kucera complex, 30 to 50 percent slopes; about 3 miles west and 1.5 miles north of Malad City, in Oneida County, Idaho; about 1,800 feet east and 1,700 feet north of the southwest corner of sec. 12, T. 14 S., R. 35 E.

A—0 to 7 inches; light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; moderate medium granular structure; soft, very friable, slightly sticky and nonplastic; common coarse to very fine roots; few medium and many fine and very fine irregular pores; strongly effervescent; slightly alkaline (pH 7.6); clear wavy boundary.

Bk1—7 to 16 inches; light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; few coarse and medium and many fine and very fine roots;

few medium and many fine and very fine tubular pores; strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

Bk2—16 to 38 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; weak thin platy structure; hard, friable, slightly sticky and slightly plastic; common medium and many fine and very fine roots in vertical cracks; many very fine irregular pores; many manganese coatings on faces of plates; strongly effervescent; moderately alkaline (pH 8.4); abrupt smooth boundary.

C—38 to 60 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; weak thin platy structure; hard, friable, slightly sticky and nonplastic; common fine and very fine roots in vertical cracks; many very fine irregular pores; common distinct strong brown (7.5YR 5/6) relict masses of iron accumulation; slightly effervescent; moderately alkaline (pH 8.4).

Range in Characteristics

Profile:

Depth to secondary carbonates—2 to 8 inches

Particle-size control section (average):

Clay content—10 to 17 percent

A horizon:

Value—5 to 7 dry, 4 or 5 moist

Chroma—2 or 3 dry or moist

Bk and C horizons:

Value—5 to 7 dry, 4 to 6 moist

Chroma—2 or 3 dry or moist

Texture—silt loam or very fine sandy loam

Calcium carbonate equivalent—10 to 30 percent

Hondoho Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Fan remnants, hills, and mountains

Parent material: Kind—alluvium; source—mixed

Slope range: 4 to 70 percent

Elevation: 5,000 to 6,700 feet

Mean annual precipitation: 12 to 18 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 75 to 100 days

Taxonomic class: Loamy-skeletal, mixed, frigid Calcic Haploxerolls

Typical Pedon

Hondoho gravelly silt loam in an area of Ridgecrest-Hondoho complex, 30 to 60 percent slopes; about 0.5 mile northeast of top of Jensen Pass, in Oneida County, Idaho; about 1,200 feet north and 2,500 feet east of the southwest corner of sec. 29, T. 12 S., R. 34 E.

Ap—0 to 4 inches; grayish brown (10YR 5/2) gravelly silt loam, very dark grayish brown (10YR 3/2) moist; weak very fine subangular blocky structure parting to weak fine granular; soft, very friable, slightly sticky and slightly plastic; many very fine and common fine, medium, and coarse roots; common very fine tubular

pores; 20 percent gravel and 5 percent cobbles; slightly alkaline (pH 7.6); clear wavy boundary.

AB—4 to 12 inches; grayish brown (10YR 5/2) gravelly silt loam, very dark grayish brown (10YR 3/2) moist; moderate very fine and fine subangular blocky structure parting to weak very fine granular; soft, very friable, slightly sticky and slightly plastic; common very fine to coarse roots; common very fine tubular pores; 20 percent gravel and 5 percent cobbles; slightly alkaline (pH 7.6); abrupt wavy boundary.

Bw—12 to 14 inches; grayish brown (10YR 5/2) gravelly silt loam, dark brown (10YR 3/3) moist; moderate very fine, fine, and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine to coarse roots; common very fine tubular pores; 15 percent gravel and 5 percent cobbles; slightly alkaline (pH 7.5); clear wavy boundary.

Bk1—14 to 19 inches; pale brown (10YR 6/3) very cobbly loam, brown (10YR 4/3) moist; weak very fine, fine, and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine to coarse roots; common very fine tubular pores; 15 percent gravel and 30 percent cobbles; strongly effervescent; slightly alkaline (pH 7.6); gradual wavy boundary.

Bk2—19 to 28 inches; pale brown (10YR 6/3) very cobbly loam, brown (10YR 4/3) moist; weak fine, medium, and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, medium, and coarse and few fine roots; common very fine and few fine tubular pores; 25 percent gravel and 25 percent cobbles; strongly effervescent; 1- to 2-millimeter-thick coatings of secondary carbonates on rock fragments; slightly alkaline (pH 7.8); clear wavy boundary.

Bk3—28 to 43 inches; very pale brown (10YR 7/3) very cobbly loam, pale brown (10YR 6/3) moist; weak fine, medium, and coarse subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine and fine roots; few very fine tubular pores; 25 percent gravel and 25 percent cobbles; violently effervescent; 1- to 2-millimeter-thick coatings of secondary carbonates on rock fragments; moderately alkaline (pH 7.9); gradual wavy boundary.

Bk4—43 to 60 inches; very pale brown (10YR 7/3) very cobbly loam, pale brown (10YR 6/3) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; few very fine tubular pores; 15 percent gravel and 40 percent cobbles; strongly effervescent; 1- to 2-millimeter-thick coatings of secondary carbonates on rock fragments; moderately alkaline (pH 7.9).

Range in Characteristics

Profile:

Thickness of mollic epipedon—12 to 16 inches

Depth to secondary carbonates—12 to 16 inches

Particle-size control section (average):

Clay content—18 to 26 percent

Rock fragment content—35 to 50 percent

Ap and AB horizons:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bw horizon:

Value—5 or 6 dry, 3 or 4 moist

Chroma—3 or 4 dry or moist

Bk horizon:

Value—6 or 7 dry, 4 to 6 moist

Chroma—2 or 3 dry or moist

Texture—very gravelly silt loam, very gravelly loam, very cobbly loam, or very gravelly coarse sandy loam

Calcium carbonate equivalent—5 to 40 percent

Hutchley Series*Depth class:* Shallow to bedrock (lithic)*Drainage class:* Well drained*Permeability:* Moderately slow*Landform:* Hills on lava plains*Parent material:* Kind—residuum and colluvium; source—basalt*Slope range:* 4 to 40 percent*Elevation:* 5,200 to 6,200 feet*Mean annual precipitation:* 12 to 16 inches*Mean annual air temperature:* 42 to 45 degrees F*Frost-free period:* 70 to 90 days*Taxonomic class:* Loamy-skeletal, mixed, frigid Lithic Argixerolls***Typical Pedon***

Hutchley gravelly loam in an area of Hutchley-McCarey-Araveton complex, 4 to 40 percent slopes; about 6 miles west and 2 miles south of Holbrook, in Oneida County, Idaho; about 100 feet east and 900 feet north of the southwest corner of sec. 6, T. 15 S., R. 32 E.

A—0 to 6 inches; dark grayish brown (10YR 4/2) gravelly loam, very dark brown (10YR 2/2) moist; weak medium and thick platy structure parting to weak fine granular; soft, very friable, slightly sticky and slightly plastic; common very fine and medium roots and few fine and coarse roots; many very fine vesicular pores and common very fine tubular pores; 15 percent gravel and 2 percent stones; neutral (pH 7.2); abrupt irregular boundary.

Bt—6 to 13 inches; brown (10YR 4/3) very cobbly clay loam, dark brown (10YR 3/3) moist; weak fine, medium, and coarse subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine roots and few fine to coarse roots; common very fine tubular pores; 40 percent faint clay films on faces of peds and lining pores; 15 percent gravel, 35 percent cobbles, and 8 percent stones; neutral (pH 7.3); abrupt irregular boundary.

R—13 inches; hard, fractured basalt.

Range in Characteristics*Profile:*

Thickness of mollic epipedon—12 to 20 inches

Depth to bedrock—12 to 20 inches

Particle-size control section (average):

Clay content—24 to 35 percent

Rock fragment content—45 to 70 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bt horizon:

Value—4 or 5 dry, 3 or 4 moist

Chroma—2 or 3 dry or moist

Texture—very gravelly clay loam, very cobbly clay loam, or extremely cobbly clay loam

Hymas Taxadjunct*Depth class:* Shallow to bedrock (lithic)*Drainage class:* Well drained*Permeability:* Moderate*Landform:* Mountains and ridges*Parent material:* Kind—residuum and alluvium influenced by loess; source—limestone*Slope range:* 12 to 70 percent*Elevation:* 5,000 to 7,700 feet*Mean annual precipitation:* 12 to 16 inches*Mean annual air temperature:* 42 to 45 degrees F*Frost-free period:* 70 to 90 days*Taxonomic class:* Loamy-skeletal, carbonatic, frigid Lithic Calcixerolls**Typical Pedon**

Hymas very cobbly loam in an area of Hymas-Calpac-Ireland association, 30 to 70 percent slopes; about 0.5 mile south of the Bannock County line, in Oneida County, Idaho; about 2,200 feet west and 2,800 feet north of the southeast corner of sec. 4, T. 11 S., R. 34 E.

A—0 to 2 inches; grayish brown (10YR 5/2) very cobbly loam, dark brown (10YR 3/3) moist; weak fine granular structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; few very fine and fine tubular pores and many very fine irregular pores; 30 percent gravel, 20 percent cobbles, and 5 percent stones; strongly effervescent; moderately alkaline (pH 7.9); abrupt wavy boundary.

Bk1—2 to 7 inches; brown (10YR 5/3) very cobbly silt loam, dark brown (10YR 3/3) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine tubular and irregular pores; 15 percent gravel, 25 percent cobbles, and 5 percent stones; strongly effervescent; coatings of secondary carbonates on rock fragments; moderately alkaline (pH 8.1); clear wavy boundary.

Bk2—7 to 11 inches; pale brown (10YR 6/3) extremely cobbly loam, brown (10YR 4/3) moist; weak very fine subangular blocky structure parting to single grain; slightly hard, very friable, slightly sticky and slightly plastic; few very fine to medium roots; few very fine tubular pores and many very fine irregular pores; 20 percent gravel, 55 percent cobbles, and 5 percent stones; strongly effervescent; coatings of secondary carbonates on rock fragments; moderately alkaline (pH 8.1); abrupt irregular boundary.

R—11 inches; highly fractured limestone.

Range in Characteristics*Profile:*

Thickness of mollic epipedon—7 to 14 inches

Depth to calcic horizon—2 to 10 inches

Depth to bedrock—10 to 20 inches

Particle-size control section (average):

Clay content—12 to 15 percent

Rock fragment content—40 to 75 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bk horizon:

Hue—10YR or 2.5Y

Value—5 to 8 dry, 3 to 7 moist

Chroma—2 or 3 dry or moist

Texture—very cobbly silt loam, very gravelly loam, very cobbly loam, very stony loam, or extremely cobbly loam

Calcium carbonate equivalent—10 to 45 percent in the Bk1 horizon and 40 to 50 percent in Bk2 horizon

Taxadjunct Feature

The Hymas soils in this survey area have a calcic horizon, which is outside the range for the official series. This difference, however, does not affect the use and management of the soils.

Inkom Series*Depth class:* Very deep (greater than 60 inches)*Drainage class:* Poorly drained*Permeability:* Moderate*Landform:* Flood plains*Parent material:* Kind—alluvium; source—mixed*Slope range:* 0 to 1 percent*Elevation:* 5,000 to 5,600 feet*Mean annual precipitation:* 14 to 16 inches*Mean annual air temperature:* 42 to 45 degrees F*Frost-free period:* 80 to 100 days*Taxonomic class:* Fine-silty, mixed (calcareous), frigid Cumulic Endoaquolls***Typical Pedon***

Inkom silt loam, 0 to 1 percent slopes; about 6 miles north of Daniels, in Oneida County, Idaho; about 2,500 feet east and 2,210 feet north of the southwest corner of sec. 18, T. 11 S., R. 35 E.; colors in this pedon description are for moist soil unless otherwise noted.

A—0 to 2 inches; very dark gray (10YR 3/1) silt loam, dark grayish brown (10YR 4/2) dry; weak fine granular structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and fine roots; few medium and common very fine and fine tubular pores; slightly effervescent; moderately alkaline (pH 8.1); clear smooth boundary.

Ag—2 to 6 inches; very dark grayish brown (10YR 3/2) silt loam, grayish brown (10YR 5/2) dry; weak very fine subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; many very fine and fine roots; few medium and many very fine tubular pores; common fine prominent dark yellowish brown (10YR 4/6) masses of iron accumulation; slightly effervescent; moderately alkaline (pH 8.1); clear smooth boundary.

Bg1—6 to 8 inches; black (10YR 2/1) silt loam, dark grayish brown (10YR 4/2) dry; moderate fine subangular blocky structure; hard, friable, slightly sticky and slightly

plastic; common very fine and fine roots; common very fine and fine tubular pores; common medium prominent yellowish brown (10YR 5/6) masses of iron accumulation; slightly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

Bg2—8 to 12 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; strong fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; few medium and many very fine and fine tubular pores; few fine prominent dark yellowish brown (10YR 4/6) masses of iron accumulation; slightly effervescent; moderately alkaline (pH 8.2); clear wavy boundary.

Agb—12 to 25 inches; black (10YR 2/1) silt loam, very dark gray (10YR 3/1) dry; strong fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few very fine roots; many very fine and fine tubular pores; few medium prominent yellowish brown (10YR 5/4) masses of iron accumulation; strongly effervescent; moderately alkaline (pH 8.2); clear wavy boundary.

Bgb—25 to 32 inches; dark grayish brown (10YR 4/2) silt loam, light gray (10YR 7/1) dry; moderate fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few very fine roots; many very fine tubular pores; common medium distinct light yellowish brown (10YR 6/4) masses of iron accumulation; strongly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

Cg1—32 to 48 inches; grayish brown (2.5Y 5/2) silt loam, white (10YR 8/1) dry; massive; hard, firm, moderately sticky and moderately plastic; few fine prominent olive yellow (2.5Y 6/6) masses of iron accumulation; strongly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

Cg2—48 to 60 inches; dark grayish brown (2.5Y 4/2) silt loam, light gray (2.5Y 7/2) dry; massive; hard, friable, slightly sticky and slightly plastic; many medium prominent light olive brown (2.5Y 5/6) masses of iron accumulation; strongly effervescent; slightly alkaline (pH 7.8).

Range in Characteristics

Profile:

Thickness of mollic epipedon—24 to 31 inches

Depth to seasonal high water table—at the surface to a depth of 18 inches below the surface in February through June

Particle-size control section (average):

Clay content—18 to 27 percent

A, Ag, and Agb horizons:

Value—3 to 5 dry, 2 or 3 moist

Chroma—1 or 2 dry or moist

Bg and Bgb horizons:

Value—4 to 7 dry, 2 to 4 moist

Chroma—1 or 2 dry or moist

Cg horizon:

Hue—2.5Y or 10YR

Value—7 or 8 dry, 4 or 5 moist

Chroma—1 or 2 dry or moist

Iphil Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Fan remnants and hills

Parent material: Kind—loess and alluvium; source—mixed

Slope range: 2 to 30 percent

Elevation: 5,000 to 5,900 feet

Mean annual precipitation: 13 to 16 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 80 to 100 days

Taxonomic class: Coarse-silty, mixed, frigid Typic Calcixerolls

Typical Pedon

lphil silt loam in an area of Ririe-lphil-Rexburg complex, 4 to 12 percent slopes; about 6 miles northwest of Malad City, in Oneida County, Idaho; about 1,200 feet west and 1,850 feet south of the northeast corner of sec. 6, T. 13 S., R. 35 E.

Ap—0 to 10 inches; brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist; weak very fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and common fine roots; many very fine irregular pores and common very fine and fine tubular pores; strongly effervescent; slightly alkaline (pH 7.8); clear wavy boundary.

Bk1—10 to 21 inches; light gray (10YR 7/2) silt loam, brown (10YR 5/3) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; common very fine and fine tubular pores; violently effervescent; common fine masses and threads of secondary carbonates; moderately alkaline (pH 8.2); gradual wavy boundary.

Bk2—21 to 36 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 5/3) moist; weak fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; common very fine and fine tubular pores; violently effervescent; common fine masses and threads of secondary carbonates; strongly alkaline (pH 8.6); clear wavy boundary.

Bk3—36 to 50 inches; very pale brown (10YR 7/3) loam, brown (10YR 5/3) moist; weak very fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; common very fine irregular and tubular pores; strongly effervescent; 5 to 10 percent carbonate nodules 3 to 8 millimeters in diameter; discontinuous very weak cementation with secondary carbonates; strongly alkaline (pH 8.8); gradual wavy boundary.

C—50 to 60 inches; very pale brown (10YR 7/3) loam, yellowish brown (10YR 5/4) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and few fine tubular pores; strongly effervescent; strongly alkaline (pH 8.9).

Range in Characteristics

Profile:

Thickness of mollic epipedon—7 to 15 inches

Depth to calcic horizon—7 to 16 inches

Particle-size control section (average):

Clay content—10 to 18 percent

Content of sand that is coarser than very fine sand—2 to 10 percent

Rock fragment content—0 to 3 percent gravel

Ap horizon:

Chroma—2 or 3 dry or moist

Bk1 and Bk2 horizons:

Value—6 to 8 dry, 4 to 6 moist

Chroma—2 or 3 dry or moist

Texture—silt loam or loam

Calcium carbonate equivalent—15 to 35 percent

Bk3 and C horizons:

Value—7 or 8 dry, 4 to 6 moist

Chroma—2 to 4 dry or moist

Texture—loam or silt loam

Calcium carbonate equivalent—10 to 15 percent

Ireland Series

Depth class: Moderately deep to bedrock (lithic)

Drainage class: Well drained

Permeability: Moderate

Landform: Mountains and ridges

Parent material: Kind—colluvium, alluvium, and residuum; source—limestone and dolostone

Slope range: 30 to 70 percent

Elevation: 5,200 to 7,200 feet

Mean annual precipitation: 16 to 20 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 70 to 90 days

Taxonomic class: Loamy-skeletal, mixed, frigid Calcic Haploxerolls

Typical Pedon

Ireland very gravelly silt loam in an area of Ireland-Calpac association, 30 to 60 percent slopes; about 0.75 mile north of Holbrook Summit, on North Canyon Road, in Oneida County, Idaho; about 2,000 feet south and 100 feet west of the northeast corner of sec. 27, T. 14 S., R. 34 E.

A—0 to 8 inches; grayish brown (10YR 5/2) very gravelly silt loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and few fine and medium roots; few very fine tubular pores and common very fine irregular pores; 25 percent gravel and 10 percent cobbles; slightly alkaline (pH 7.8); abrupt wavy boundary.

ABk—8 to 16 inches; grayish brown (10YR 5/2) extremely cobbly silt loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and few fine, medium, and coarse roots; common very fine irregular pores and few very fine and fine tubular pores; 10 percent gravel and 60 percent cobbles; slightly effervescent; common coatings of secondary carbonates on underside of rock fragments; moderately alkaline (pH 8.0); abrupt wavy boundary.

Bk—16 to 28 inches; brown (10YR 5/3) extremely cobbly silt loam, brown (10YR 4/3) moist; weak very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine to coarse roots; few very fine tubular pores; 10 percent gravel and 60 percent cobbles; strongly effervescent; common coatings of secondary carbonates on underside of rock fragments; moderately alkaline (pH 8.1); abrupt wavy boundary.

R—28 inches; fractured limestone with carbonate coatings and soil material in fractures.

Range in Characteristics

Profile:

Thickness of mollic epipedon—10 to 19 inches

Depth to secondary carbonates—8 to 24 inches

Depth to bedrock—20 to 40 inches

Particle-size control section (average):

Clay content—16 to 22 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

ABk and Bk horizons:

Hue—10YR or 7.5YR

Value—5 to 7 dry, 3 to 5 moist

Chroma—2 to 4 dry or moist

Texture—extremely cobbly silt loam, extremely stony silt loam, or extremely cobbly loam

Calcium carbonate equivalent—5 to 25 percent

Jensen Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Fan remnants and lake terraces

Parent material: Kind—alluvium and lacustrine deposits; source—mixed

Slope range: 0 to 30 percent

Elevation: 4,900 to 5,900 feet

Mean annual precipitation: 13 to 18 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 80 to 100 days

Taxonomic class: Fine-loamy, mixed, frigid Calcic Pachic Argixerolls

Typical Pedon

Jensen silt loam in an area of Elevator-Jensen complex, 4 to 12 percent slopes; about 12 miles southwest of Malad City, in Oneida County, Idaho; about 1,500 feet east and 300 feet north of the southwest corner of sec. 7, T. 16 S., R. 34 E.

Ap—0 to 6 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, friable, slightly sticky and slightly plastic; many very fine and fine roots; 10 percent gravel; neutral (pH 7.2); clear smooth boundary.

A—6 to 12 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure parting to moderate fine granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine and fine roots; 10 percent gravel; slightly alkaline (pH 7.4); clear smooth boundary.

Bt1—12 to 22 inches; brown (10YR 5/3) gravelly silt loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; 20 percent gravel; 15 percent faint clay films lining pores; slightly alkaline (pH 7.6); clear wavy boundary.

Bt2—22 to 38 inches; brown (10YR 5/3) gravelly silt loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; hard, very firm, slightly sticky and slightly plastic; common very fine and few fine roots; 20 percent gravel;

15 percent faint clay films lining pores; slightly alkaline (pH 7.6); clear smooth boundary.

Bk1—38 to 45 inches; pale brown (10YR 6/3) gravelly silt loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; very hard, very firm, slightly sticky and slightly plastic; few very fine roots; many very fine and fine tubular pores; 30 percent gravel and 1 percent cobbles; strongly effervescent; many threads of secondary carbonates; moderately alkaline (pH 8.0); clear wavy boundary.

Bk2—45 to 60 inches; pale brown (10YR 6/3) very gravelly loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; very hard, very firm, slightly sticky and slightly plastic; few very fine roots; 35 percent gravel and 1 percent cobbles; strongly effervescent; many threads of secondary carbonates; moderately alkaline (pH 7.8).

Range in Characteristics

Profile:

Thickness of mollic epipedon—31 to 45 inches

Depth to secondary carbonates—16 to 40 inches

Particle-size control section (average):

Clay content—18 to 25 percent

Rock fragment content—10 to 30 percent

Ap and A horizons:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bt horizon:

Value—4 to 6 dry, 3 or 4 moist

Chroma—2 or 3 dry or moist

Texture—silt loam, gravelly silt loam, or gravelly loam

Bk horizon:

Hue—10YR or 7.5YR

Value—5 to 7 dry, 4 to 6 moist

Chroma—3 to 5 dry or moist

Texture—gravelly silt loam, very gravelly loam, very gravelly silt loam, or gravelly loam

Rock fragment content—15 to 60 percent

Calcium carbonate equivalent—5 to 15 percent

Jovine Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Moderately well drained

Permeability: Moderate

Landform: Depressions and low stream terraces

Parent material: Kind—alluvium; source—mixed

Slope range: 0 to 2 percent

Elevation: 4,900 to 5,200 feet

Mean annual precipitation: 13 to 16 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 80 to 100 days

Taxonomic class: Coarse-silty, mixed, frigid Cumulic Haploxerolls

Typical Pedon

Jovine silt loam, 0 to 2 percent slopes; about 7 miles north and 1 mile east of Holbrook, in Oneida County, Idaho; about 350 feet west and 50 feet north of the southeast corner of sec. 20, T. 13 S., R. 33 E.

- Ap—0 to 7 inches; grayish brown (10YR 5/2) silt loam, very dark brown (10YR 2/2) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and common fine roots; common very fine tubular and irregular pores; 3 percent gravel; neutral (pH 7.3); clear wavy boundary.
- Bw1—7 to 18 inches; brown (10YR 5/3) silt loam, very dark grayish brown (10YR 3/2) moist; moderate medium and coarse subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine tubular pores; 1 percent fine gravel; neutral (pH 7.2); gradual wavy boundary.
- Bw2—18 to 29 inches; brown (10YR 5/3) silt loam, very dark brown (10YR 2/2) moist; weak fine prismatic structure parting to weak fine subangular blocky; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular pores; slightly alkaline (pH 7.8); gradual wavy boundary.
- Bw3—29 to 44 inches; dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; weak medium prismatic structure parting to weak fine and medium subangular blocky; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and few fine tubular pores; slightly alkaline (pH 7.7); gradual wavy boundary.
- Bw4—44 to 60 inches; dark grayish brown (10YR 4/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak medium prismatic structure parting to weak fine and medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; common very fine roots; common very fine and few fine tubular pores; 5 percent weakly cemented groundwater carbonate nodules; 5 percent gravel; slightly alkaline (pH 7.6).

Range in Characteristics

Profile:

Thickness of mollic epipedon—45 to 60 inches

Depth to finely disseminated carbonates—more than 60 inches

Depth to seasonal high water table—60 to 72 inches in April through June

Particle-size control section (average):

Clay content—15 to 18 percent

Rock fragment content—0 to 5 percent gravel

Ap horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bw horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Justesen Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderately slow

Landform: Fan remnants and hills

Parent material: Kind—alluvium; source—mixed igneous and sedimentary rock

Slope range: 4 to 25 percent

Elevation: 4,800 to 6,000 feet

Mean annual precipitation: 13 to 16 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 80 to 100 days

Taxonomic class: Fine-loamy, mixed, frigid Calcic Argixerolls

Typical Pedon

Justesen silt loam in an area of Justesen-Ririe-Buist complex, 12 to 20 percent slopes; about 5 miles north of Holbrook, in Oneida County, Idaho; about 500 feet west and 650 feet south of the northeast corner of sec. 1, T. 14 S., R. 32 E.

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many very fine, common fine, and few medium roots; common very fine and fine tubular pores; 10 percent gravel; neutral (pH 7.2); clear wavy boundary.

Bt1—8 to 16 inches; brown (10YR 5/3) silt loam, very dark grayish brown (10YR 3/2) moist; common fine and very fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine and fine roots and few medium roots; common very fine and fine tubular pores; 40 percent faint clay films on faces of peds and lining pores; 10 percent gravel; neutral (pH 7.2); clear wavy boundary.

Bt2—16 to 27 inches; light yellowish brown (10YR 6/4) silty clay loam, brown (10YR 4/3) moist; common fine and very fine subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine and few fine and medium roots; common very fine and fine tubular pores; 40 percent distinct clay films on faces of peds and lining pores; 10 percent gravel; neutral (pH 7.3); clear wavy boundary.

Bk1—27 to 45 inches; light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; weak fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; common very fine and fine tubular pores; 10 percent gravel; violently effervescent; many fine and medium masses and threads of secondary carbonates; slightly alkaline (pH 7.5); clear wavy boundary.

Bk2—45 to 55 inches; light yellowish brown (10YR 6/4) gravelly loam, brown (10YR 4/3) moist; massive; hard, friable, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; 15 percent gravel; violently effervescent; many fine and medium masses and threads of secondary carbonates; slightly alkaline (pH 7.8); clear wavy boundary.

Bk3—55 to 60 inches; very pale brown (10YR 7/3) gravelly loam, yellowish brown (10YR 5/4) moist; massive; hard, friable, slightly sticky and slightly plastic; few very fine tubular pores; 25 percent gravel; violently effervescent; many fine and medium masses and threads of secondary carbonates; slightly alkaline (pH 7.8).

Range in Characteristics

Profile:

Thickness of mollic epipedon—11 to 19 inches

Depth to secondary carbonates—24 to 40 inches

Particle-size control section (average):

Clay content—20 to 34 percent

Ap horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bt horizon:

Value—4 to 6 dry, 3 to 5 moist

Chroma—2 to 4 dry or moist

Texture—silt loam or silty clay loam

Bk horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—3 to 6 dry or moist

Texture—silt loam or gravelly loam

Rock fragment content—0 to 30 percent

Calcium carbonate equivalent—5 to 20 percent

Kearns Series*Depth class:* Very deep (greater than 60 inches)*Drainage class:* Well drained*Permeability:* Moderate*Landform:* Lake terraces*Parent material:* Kind—lacustrine deposits; source—mixed*Slope range:* 0 to 12 percent*Elevation:* 4,400 to 5,200 feet*Mean annual precipitation:* 14 to 16 inches*Mean annual air temperature:* 47 to 49 degrees F*Frost-free period:* 100 to 120 days*Taxonomic class:* Fine-silty, mixed, mesic Calcic Haploxerolls**Typical Pedon**

Kearns silt loam, 0 to 2 percent slopes; about 9.5 miles south and 8 miles west of Holbrook, in Oneida County, Idaho; about 1,900 feet west and 75 feet south of the northeast corner of sec. 4, T. 16 S., R. 31 E.

A—0 to 8 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate medium and thick platy structure parting to weak fine granular; soft, very friable, slightly sticky and slightly plastic; few coarse and common medium, fine, and very fine roots; common very fine irregular and tubular pores; slightly alkaline (pH 7.7); clear wavy boundary.

Bw—8 to 18 inches; light brownish gray (10YR 6/2) silt loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few coarse and common medium, fine, and very fine roots; few medium and fine and common very fine tubular pores; moderately alkaline (pH 7.9); gradual wavy boundary.

Bk1—18 to 32 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; moderate medium and coarse subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few medium and fine and common very fine roots; few very fine vesicular pores and common very fine tubular pores; slightly effervescent; few threads of secondary carbonates; moderately alkaline (pH 8.0); clear wavy boundary.

Bk2—32 to 57 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 4/3) moist; massive; hard, firm, slightly sticky and slightly plastic; few fine and very fine roots; common very fine tubular and vesicular pores; strongly effervescent; few threads of secondary carbonates; moderately alkaline (pH 8.3); clear wavy boundary.

Bk3—57 to 67 inches; light gray (2.5Y 7/2) silt loam, grayish brown (2.5Y 5/2) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; violently effervescent; common threads of secondary carbonates; strongly alkaline (pH 8.9).

Range in Characteristics

Profile:

Thickness of mollic epipedon—7 to 18 inches

Depth to secondary carbonates—14 to 30 inches

Particle-size control section (average):

Clay content—18 to 26 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bw and Bk1 horizons:

Value—5 to 7 dry, 3 to 5 moist

Chroma—2 to 4 dry or moist

Calcium carbonate equivalent—0 to 5 percent

Bk2 and Bk3 horizons:

Hue—10YR or 2.5Y

Value—5 to 8 dry, 3 to 6 moist

Chroma—2 to 4 dry or moist

Texture—silt loam or very fine sandy loam

Calcium carbonate equivalent—5 to 25 percent

Kidman Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Lake terraces

Parent material: Kind—lacustrine deposits and alluvium; source—mixed

Slope range: 1 to 6 percent

Elevation: 4,500 to 4,800 feet

Mean annual precipitation: 13 to 15 inches

Mean annual air temperature: 47 to 49 degrees F

Frost-free period: 110 to 130 days

Taxonomic class: Coarse-loamy, mixed, mesic Calcic Haploxerolls

Typical Pedon

Kidman fine sandy loam in an area of Kidman-Preston association, 2 to 12 percent slopes; about 4 miles west of Malad City, in Oneida County, Idaho; about 1,650 feet north and 350 feet east of the southwest corner of sec. 14, T. 14 S., R. 35 E.

A1—0 to 4 inches; brown (10YR 4/3) fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium and thick platy structure; soft, very friable, nonsticky and nonplastic; many fine and very fine roots; many very fine irregular pores; slightly alkaline (pH 7.4); abrupt smooth boundary.

A2—4 to 17 inches; grayish brown (10YR 5/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; soft, very friable, nonsticky and nonplastic; few fine and common very fine

roots; many very fine irregular pores; slightly alkaline (pH 7.4); clear wavy boundary.

Bw—17 to 38 inches; light brownish gray (10YR 6/2) fine sandy loam, very dark grayish brown (10YR 3/2) moist; moderate medium and coarse subangular blocky structure; soft, very friable, nonsticky and nonplastic; few fine and common very fine roots; many very fine irregular pores; slightly alkaline (pH 7.4); clear wavy boundary.

Bk—38 to 66 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; massive; slightly hard, friable, nonsticky and nonplastic; few very fine roots; many very fine irregular pores; strongly effervescent; secondary carbonates finely disseminated in matrix; strongly alkaline (pH 8.6).

Range in Characteristics

Profile:

Thickness of mollic epipedon—9 to 18 inches

Depth to secondary carbonates—20 to 40 inches

Particle-size control section (average):

Clay content—8 to 18 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bw horizon:

Value—4 to 6 dry, 3 or 4 moist

Chroma—2 to 4 dry or moist

Bk horizon:

Value—6 or 7 dry, 4 to 6 moist

Chroma—3 or 4 dry or moist

Calcium carbonate equivalent—15 to 30 percent

Kucera Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Lake terraces and fan remnants

Parent material: Kind—loess and alluvium; source—mixed

Slope range: 2 to 50 percent

Elevation: 4,400 to 5,300 feet

Mean annual precipitation: 13 to 16 inches

Mean annual air temperature: 44 to 46 degrees F

Frost-free period: 90 to 100 days

Taxonomic class: Coarse-silty, mixed, frigid Calcic Pachic Haploxerolls

Typical Pedon

Kucera silt loam in an area of Rexburg-Ririe-Kucera complex, 2 to 8 percent slopes; about 17 miles north and 4 miles east of Holbrook, in Oneida County, Idaho; about 850 feet south and 50 feet west of the northeast corner of sec. 2, T. 12 S., R. 33 E.

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; moderate fine granular structure; hard, very friable, slightly sticky and

slightly plastic; few fine and common very fine roots; many very fine tubular pores; neutral (pH 7.0); clear smooth boundary.

A1—8 to 14 inches; dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few fine and common very fine roots; many very fine tubular pores; neutral (pH 7.0); clear smooth boundary.

A2—14 to 22 inches; brown (10YR 5/3) silt loam, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; neutral (pH 7.0); clear smooth boundary.

Bw—22 to 42 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine roots; many very fine tubular pores; 5 percent cicada krotovinas; neutral (pH 7.0); clear smooth boundary.

Bk—42 to 60 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 5/3) moist; massive; hard, friable, slightly sticky and slightly plastic; few very fine roots; many very fine tubular pores; 5 percent cicada krotovinas; strongly effervescent; few threads of secondary carbonates; moderately alkaline (pH 8.4).

Range in Characteristics

Profile:

Thickness of mollic epipedon—22 to 34 inches

Depth to secondary carbonates—20 to 42 inches

Particle-size control section (average):

Clay content—10 to 18 percent

Ap horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bw horizon:

Value—5 or 6 dry, 3 or 4 moist

Chroma—2 or 3 dry or moist

Bk horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 or 3 dry or moist

Calcium carbonate equivalent—5 to 15 percent

Lagonot Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Somewhat poorly drained

Permeability: Moderate

Landform: Lake terraces and flood plains

Parent material: Kind—alluvium; source—mixed

Slope range: 0 to 3 percent

Elevation: 4,300 to 4,700 feet

Mean annual precipitation: 12 to 14 inches

Mean annual air temperature: 46 to 47 degrees F

Frost-free period: 100 to 110 days

Taxonomic class: Fine-silty, mixed, mesic Aquic Calcixerolls

Typical Pedon

Lagonot silt loam, 0 to 3 percent slopes; about 4 miles west and 2 miles south of Malad City, in Oneida County, Idaho; about 300 feet north and 1,450 feet east of the southwest corner of sec. 6, T. 15 S., R. 36 E.

- A1—0 to 3 inches; grayish brown (2.5Y 5/2) silt loam, very dark grayish brown (2.5Y 3/2) moist; moderate thin platy structure; hard, very friable, slightly sticky and slightly plastic; many fine and very fine roots; common medium and many fine and very fine tubular pores; strongly effervescent; strongly alkaline (pH 8.6); abrupt smooth boundary.
- A2—3 to 10 inches; grayish brown (2.5Y 5/2) silt loam, very dark grayish brown (2.5Y 3/2) moist; weak medium and fine subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; few medium and common fine and very fine roots; common fine and many very fine tubular pores; slightly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.
- Bk1—10 to 19 inches; light brownish gray (2.5Y 6/2) silt loam, dark grayish brown (2.5Y 4/2) moist; moderate fine subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; common medium and many fine and very fine roots; few medium and many fine and very fine tubular pores; strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary.
- Bk2—19 to 34 inches; light gray (2.5Y 7/2) silt loam, light brownish gray (2.5Y 6/2) moist; 40 percent fine faint pale brown (10YR 6/3) mottles; massive; hard, very friable, slightly sticky and slightly plastic; few fine and very fine roots; common medium and many fine and very fine tubular pores; violently effervescent; strongly alkaline (pH 8.6); clear wavy boundary.
- Bk3—34 to 60 inches; pale yellow (2.5Y 8/2) silt loam, light brownish gray (2.5Y 6/2) moist; 70 percent fine faint pale brown (10YR 6/3) mottles; massive; hard, very friable, slightly sticky and slightly plastic; few very fine and fine roots; common medium and many fine and very fine tubular pores; violently effervescent; strongly alkaline (pH 8.6).

Range in Characteristics

Profile:

Thickness of mollic epipedon—10 to 19 inches

Depth to calcic horizon—10 to 19 inches

Depth to seasonal high water table—18 to 42 inches in October through June

Particle-size control section (average):

Clay content—18 to 24 percent

A horizon:

Hue—10YR or 2.5Y

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bk horizon:

Hue—10YR or 2.5Y

Value—6 to 8 dry, 4 to 6 moist

Chroma—2 or 3 dry or moist

Calcium carbonate equivalent—15 to 35 percent

Langless Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Poorly drained

Permeability: Moderate

Landform: Lake terraces

Parent material: Kind—alluvium and lacustrine deposits; source—mixed

Slope range: 0 to 2 percent

Elevation: 4,300 to 4,500 feet

Mean annual precipitation: 12 to 14 inches

Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 100 to 120 days

Taxonomic class: Coarse-silty, mesic Typic Calciaquolls

Typical Pedon

Langless silt loam in an area of Brinnum-Logan-Langless complex, 0 to 2 percent slopes; about 6 miles south of Malad City, in Oneida County, Idaho; about 1,900 feet west and 2,250 feet south of the northeast corner of sec. 20, T. 15 S., R. 36 E.; colors in this pedon description are for moist soil unless otherwise noted.

Oi—0 to 3 inches; live and decomposing grass stems and roots; abrupt smooth boundary.

Akg1—3 to 9 inches; black (10YR 2/1) silt loam, dark gray (10YR 4/1) dry; weak medium platy structure parting to moderate medium granular; slightly hard, very friable, slightly sticky and slightly plastic; many medium and common fine and very fine roots; many fine and very fine tubular pores; strongly effervescent; 35 percent calcium carbonate equivalent; moderately alkaline (pH 8.4); clear smooth boundary.

Akg2—9 to 18 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; moderate fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many medium and common fine and very fine roots; few medium and common fine and very fine tubular pores; strongly effervescent; 55 percent calcium carbonate equivalent; 20 percent fine masses of secondary carbonates; moderately alkaline (pH 8.4); abrupt smooth boundary.

Bkg1—18 to 25 inches; light brownish gray (10YR 6/2) silt loam, white (10YR 8/1) dry; massive; slightly hard, very friable, slightly sticky and slightly plastic; common medium roots and few fine and very fine roots; few medium, fine, and very fine tubular pores; violently effervescent; 60 percent calcium carbonate equivalent; 30 percent fine nodules of secondary carbonates; moderately alkaline (pH 8.4); clear smooth boundary.

Bkg2—25 to 47 inches; light gray (10YR 7/2) silt loam, very pale brown (10YR 8/2) dry; massive; slightly hard, very friable, slightly sticky and slightly plastic; few medium to very fine roots; many coarse and common medium to very fine tubular pores; violently effervescent; 50 percent calcium carbonate equivalent; 15 percent medium nodules of secondary carbonates; moderately alkaline (pH 8.4); clear wavy boundary.

Cg—47 to 63 inches; grayish brown (10YR 5/2) silt loam, light gray (10YR 7/2) dry; massive; slightly hard, very friable, slightly sticky and slightly plastic; common coarse and medium and few fine and very fine roots; common coarse and medium and few fine and very fine tubular pores; violently effervescent; 20 percent calcium carbonate equivalent; moderately alkaline (pH 8.0).

Range in Characteristics

Profile:

Thickness of mollic epipedon—12 to 20 inches

Depth to seasonal high water table—12 to 18 inches in October through June

Particle-size control section (average):

Clay content—15 to 18 percent

Akg horizon:

Hue—10YR or 2.5Y

Value—4 or 5 dry, 2 or 3 moist

Chroma—1 or 2 dry or moist

Calcium carbonate equivalent—20 to 40 percent

Bkg horizon:

Hue—10YR or 2.5Y

Value—6 to 8 dry, 4 to 7 moist

Chroma—1 or 2 dry or moist

Calcium carbonate equivalent—40 to 65 percent

Cg horizon:

Hue—10YR or 2.5Y

Value—6 to 8 dry, 4 to 7 moist

Chroma—1 or 2 dry or moist

Lanoak Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Fan remnants and hills

Parent material: Kind—loess and alluvium; source—mixed

Slope range: 0 to 30 percent

Elevation: 5,100 to 6,000 feet

Mean annual precipitation: 15 to 17 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 80 to 100 days

Taxonomic class: Fine-silty, mixed, frigid Pachic Haploxerolls

Typical Pedon

Lanoak silt loam in an area of Rexburg-Lanoak complex, 4 to 12 percent slopes; about 7 miles west and 12 miles north of Malad City, in Oneida County, Idaho; about 600 feet north and 500 feet east of the southwest corner of sec. 20, T. 12 S., R. 35 E.

Ap—0 to 10 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and slightly plastic; few fine and very fine roots; few fine and many very fine irregular pores; slightly acid (pH 6.4); clear smooth boundary.

BA—10 to 30 inches; brown (10YR 5/3) silt loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure parting to weak fine granular; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; few fine and many very fine tubular pores; neutral (pH 6.8); clear smooth boundary.

Bt1—30 to 35 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; few very fine roots; few fine and many very fine tubular pores; 15 percent faint clay films on faces of peds; neutral (pH 6.8); clear smooth boundary.

Bt2—35 to 49 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; hard, very friable, slightly sticky and

slightly plastic; few very fine roots; few fine and many very fine tubular pores; 15 percent faint clay films on faces of peds; neutral (pH 7.0); abrupt smooth boundary.

Bk—49 to 60 inches; light gray (10YR 7/2) silt loam, brown (10YR 4/3) moist; massive; hard, very friable, nonsticky and nonplastic; few very fine roots; many very fine irregular pores; violently effervescent; secondary carbonates finely disseminated in matrix; slightly alkaline (pH 7.7).

Range in Characteristics

Profile:

Thickness of mollic epipedon—20 to 35 inches

Depth to secondary carbonates—45 to 60 inches

Particle-size control section (average):

Clay content—18 to 27 percent

Ap and BA horizons:

Value—3 to 5 dry, 1 to 3 moist

Chroma—2 or 3 dry or moist

Bt horizon:

Value—5 or 6 dry, 2 to 4 moist

Chroma—2 or 3 dry or moist

Bk horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 or 3 dry or moist

Calcium carbonate equivalent—0 to 15 percent

Lizdale Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderately rapid

Landform: Mountains and hills

Parent material: Kind—alluvium; source—limestone, tuffaceous limestone, and sandstone

Slope range: 6 to 70 percent

Elevation: 4,800 to 6,400 feet

Mean annual precipitation: 14 to 20 inches

Mean annual air temperature: 43 to 45 degrees F

Frost-free period: 80 to 100 days

Taxonomic class: Loamy-skeletal, carbonatic, frigid Typic Calcixerolls

Typical Pedon

Lizdale very gravelly silt loam in an area of Ridgecrest-Hondoho-Lizdale association, 30 to 60 percent slopes (fig. 12); about 2 miles south and 3 miles east of Malad City, in Oneida County, Idaho; about 2,200 feet south and 600 feet east of the northwest corner of sec. 36, T. 14 S., R. 36 E.

A—0 to 7 inches; dark grayish brown (10YR 4/2) very gravelly silt loam, dark brown (10YR 3/3) moist; weak very fine granular structure; soft, very friable, nonsticky and nonplastic; common very fine and fine and few medium and coarse roots; common very fine and fine irregular and tubular pores; 35 percent gravel and 5 percent cobbles; slightly effervescent; 8 percent calcium carbonate equivalent; slightly alkaline (pH 7.6); clear wavy boundary.



Figure 12.— Profile of Lizdale very gravelly silt loam in an area of Ridgecrest-Hondoho-Lizdale association, 30 to 60 percent slopes.

- Bk1—7 to 10 inches; brown (10YR 5/3) very gravelly loam, brown (10YR 4/3) moist; weak fine subangular blocky structure parting to weak fine granular; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine irregular and tubular pores; 40 percent gravel and 5 percent cobbles; strongly effervescent; 30 percent calcium carbonate equivalent; coatings of secondary carbonates on rock fragments; slightly alkaline (pH 7.6); clear wavy boundary.
- Bk2—10 to 20 inches; pink (7.5YR 7/4) very gravelly sandy loam, light brown (7.5YR 6/4) moist; single grain; loose, nonsticky and nonplastic; few very fine to coarse roots; many fine irregular pores; 50 percent gravel and 5 percent cobbles; violently effervescent; 40 percent calcium carbonate equivalent; masses and threads of secondary carbonates in matrix and coatings of secondary carbonates on rock fragments; moderately alkaline (pH 8.0); clear smooth boundary.
- Bk3—20 to 36 inches; pink (7.5YR 7/4) very gravelly sandy loam, light brown (7.5YR 6/4) moist; single grain; loose, nonsticky and nonplastic; few very fine to coarse roots; many fine irregular pores; 50 percent gravel and 5 percent cobbles; violently effervescent; 45 percent calcium carbonate equivalent; masses and threads of secondary carbonates in matrix and coatings of secondary carbonates on rock fragments; slightly alkaline (pH 7.6); abrupt smooth boundary.

- C1—36 to 52 inches; light brown (7.5YR 6/4) extremely gravelly sandy loam, strong brown (7.5YR 4/6) moist; single grain; loose, nonsticky and nonplastic; few very fine and fine roots; many fine irregular pores; 80 percent gravel and 5 percent cobbles; strongly effervescent; 30 percent calcium carbonate equivalent; few coatings of secondary carbonates on underside of rock fragments; moderately alkaline (pH 8.0); clear smooth boundary.
- C2—52 to 60 inches; light brown (7.5YR 6/4) extremely gravelly loamy sand, strong brown (7.5YR 4/6) moist; single grain; loose, nonsticky and nonplastic; few very fine and fine roots; many fine irregular pores; 65 percent gravel and 5 percent cobbles; strongly effervescent; 25 percent calcium carbonate equivalent; few coatings of secondary carbonates on underside of rock fragments; moderately alkaline (pH 8.0).

Range in Characteristics

Profile:

Thickness of mollic epipedon—7 to 15 inches

Depth to calcic horizon—7 to 15 inches

Particle-size control section (average):

Clay content—10 to 18 percent

Rock fragment content—35 to 75 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bk horizon:

Hue—10YR or 7.5YR

Value—5 to 8 dry, 4 to 7 moist

Chroma—2 to 4 dry or moist

Texture—very gravelly loam or very gravelly sandy loam

Calcium carbonate equivalent—25 to 60 percent

C horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 to 6 dry or moist

Texture—extremely gravelly sandy loam or extremely gravelly loamy sand

Logan Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Poorly drained

Permeability: Moderately slow

Landform: Lake terraces and flood plains

Parent material: Kind—alluvium and lacustrine deposits; source—mixed

Slope range: 0 to 2 percent

Elevation: 4,300 to 4,700 feet

Mean annual precipitation: 12 to 14 inches

Mean annual air temperature: 46 to 47 degrees F

Frost-free period: 110 to 130 days

Taxonomic class: Fine-silty, mesic Typic Calciaquolls

Typical Pedon

Logan silt loam in an area of Brinnum-Logan-Langless complex, 0 to 2 percent slopes; about 1 mile southeast of Samaria, in Oneida County, Idaho; about 900 feet

south and 2,400 feet east of the northwest corner of sec. 24, T. 15 S., R. 35 E.; colors in this pedon description are for moist soil unless otherwise noted.

Oi—0 to 4 inches; slightly decomposed plant material consisting of grass and sedges.

A—4 to 22 inches; very dark gray (10YR 3/1) silt loam, gray (10YR 5/1) dry; weak coarse subangular blocky structure; very hard, friable, slightly sticky and slightly plastic; many very fine to medium roots; many very fine and fine tubular pores; slightly effervescent; moderately alkaline (pH 8.4); clear smooth boundary.

Bkg1—22 to 44 inches; dark gray (N 4/0) silt loam, gray (N 6/0) dry; massive; very hard, friable, slightly sticky and slightly plastic; common fine and very fine roots; common fine and medium tubular pores; common fine distinct dark yellowish brown (10YR 4/6) masses of iron accumulation; violently effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

Bkg2—44 to 59 inches; dark gray (N 4/0) silt loam, gray (N 6/0) dry; massive; very hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; common very fine to medium tubular pores; common fine distinct dark yellowish brown (10YR 4/4) masses of iron accumulation; violently effervescent; moderately alkaline (pH 8.4); gradual wavy boundary.

Cg—59 to 64 inches; gray (N 5/0) silt loam, light gray (N 7/0) dry; massive; very hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine to medium tubular pores; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation; strongly effervescent; strongly alkaline (pH 8.6).

Range in Characteristics

Profile:

Thickness of mollic epipedon—10 to 19 inches

Depth to calcic horizon—10 to 25 inches

Depth to seasonal high water table—at the surface to a depth of 18 inches below the surface in March through July

Particle-size control section (average):

Clay content—20 to 25 percent

A horizon:

Value—3 to 5 dry, 2 or 3 moist

Chroma—1 or 2 dry or moist

Bkg horizon:

Hue—2.5Y or 5Y, or neutral

Value—6 or 7 dry, 4 or 5 moist

Chroma—0 or 1 dry or moist

Calcium carbonate equivalent—5 to 35 percent

Cg horizon:

Hue—2.5Y or 5Y, or neutral

Value—6 to 8 dry, 4 to 7 moist

Chroma—0 or 1 dry or moist

Other Features

The Logan soils in this survey area average slightly less than 25 percent clay in the particle-size control section. This difference, however, does not affect the use and management of the soils.

Lonigan Series

Depth class: Moderately deep to bedrock (paralithic)

Drainage class: Well drained

Permeability: Moderately rapid

Landform: Mountains

Parent material: Kind—residuum; source—tuff

Slope range: 6 to 50 percent

Elevation: 4,800 to 6,200 feet

Mean annual precipitation: 14 to 18 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 70 to 95 days

Taxonomic class: Ashy-skeletal, frigid Vitrandic Haploxerolls

Typical Pedon

Lonigan very fine sandy loam in an area of Copenhagen-Lonigan-Manila association, 12 to 50 percent slopes; about 7 miles southeast of Malad City, in Oneida County, Idaho; about 1,000 feet west and 2,000 feet north of the southeast corner of sec. 15, T. 15 S., R. 37 E.

A1—0 to 4 inches; grayish brown (10YR 5/2) very fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak very fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine and few medium and coarse roots; few very fine tubular pores; 10 percent gravel; slightly alkaline (pH 7.8); clear wavy boundary.

A2—4 to 11 inches; grayish brown (10YR 5/2) very fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure parting to weak fine granular; soft, very friable, nonsticky and nonplastic; many very fine and fine and few medium roots; few very fine tubular pores; 10 percent gravel and 2 percent cobbles; slightly alkaline (pH 7.8); clear wavy boundary.

Bw—11 to 16 inches; light brownish gray (10YR 6/2) very gravelly loam, dark grayish brown (10YR 4/2) and grayish brown (2.5Y 5/2) moist; moderate medium subangular blocky structure parting to moderate fine granular; soft, very friable, nonsticky and nonplastic; many very fine and fine and few coarse roots; common very fine tubular pores; 40 percent gravel and 3 percent cobbles; moderately alkaline (pH 8.0); clear wavy boundary.

Bk1—16 to 20 inches; very pale brown (10YR 8/2) very gravelly loam, light gray (2.5Y 7/2) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine to medium roots; many very fine and few fine tubular pores; 35 percent gravel and 15 percent cobbles; violently effervescent; moderately alkaline (pH 8.2); clear wavy boundary.

Bk2—20 to 33 inches; white (10YR 8/1) very gravelly loam, pale brown (10YR 6/3) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine and fine roots; many very fine and few fine tubular pores; 35 percent gravel and 20 percent cobbles; violently effervescent; moderately alkaline (pH 8.2); clear smooth boundary.

Cr—33 inches; weathered tuff.

Range in Characteristics

Profile:

Thickness of mollic epipedon—8 to 15 inches

Depth to secondary carbonates—6 to 18 inches

Depth to bedrock—20 to 40 inches

Particle-size control section (average):

Clay content—10 to 18 percent

Rock fragment content—35 to 60 percent

A horizon:

Value—3 to 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bw horizon:

Hue—10YR or 2.5Y

Value—3 to 7 dry, 2 to 6 moist

Chroma—2 or 3 dry or moist

Texture—very gravelly loam or very gravelly silt loam

Bk horizon:

Hue—10YR or 2.5Y

Value—6 to 8 dry, 4 to 7 moist

Chroma—1 to 4 dry or moist

Texture—very gravelly loam or very gravelly silt loam

Calcium carbonate equivalent—15 to 35 percent

Lostine Series*Depth class:* Very deep (greater than 60 inches)*Drainage class:* Well drained*Permeability:* Moderate*Landform:* Fan remnants*Parent material:* Kind—alluvium and loess; source—mixed*Slope range:* 12 to 30 percent*Elevation:* 5,300 to 5,800 feet*Mean annual precipitation:* 14 to 18 inches*Mean annual air temperature:* 42 to 45 degrees F*Frost-free period:* 80 to 100 days*Taxonomic class:* Coarse-silty, mixed, frigid Pachic Haploxerolls**Typical Pedon**

Lostine silt loam in an area of Cedarhill-Lostine complex, 12 to 30 percent slopes; about 10 miles north and 1 mile east of Holbrook, in Oneida County, Idaho; about 700 feet west and 500 feet north of the southeast corner of sec. 7, T. 13 S., R. 33 E.

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; weak fine and medium subangular blocky structure parting to weak fine granular; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common very fine and fine tubular pores; 2 to 3 percent fine gravel; neutral (pH 7.0); clear wavy boundary.

Bw1—7 to 23 inches; dark grayish brown (10YR 4/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine roots; common very fine and fine tubular pores; neutral (pH 7.1); clear wavy boundary.

Bw2—23 to 30 inches; brown (10YR 4/3) silt loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; few very fine roots; common very fine and fine tubular pores; neutral (pH 7.3); clear wavy boundary.

Bw3—30 to 45 inches; brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist; weak medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; few very fine roots; common very fine and fine and few medium tubular pores; slightly alkaline (pH 7.4); clear wavy boundary.

C—45 to 60 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly

plastic; few very fine roots; common very fine and fine tubular pores; slightly alkaline (pH 7.6).

Range in Characteristics

Profile:

Thickness of mollic epipedon—30 to 45 inches

Particle-size control section (average):

Clay content—10 to 18 percent

Ap horizon:

Value—3 or 4 dry, 2 or 3 moist

Chroma—1 or 2 dry or moist

Bw horizon:

Value—4 or 5 dry, 3 or 4 moist

Chroma—2 or 3 dry or moist

C horizon:

Value—4 to 6 dry or moist

Chroma—2 to 4 dry or moist

Texture—silt loam or silty clay loam

Manila Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Slow

Landform: Fan remnants, hills, and mountains

Parent material: Kind—alluvium and colluvium; source—mixed

Slope range: 4 to 50 percent

Elevation: 4,900 to 6,500 feet

Mean annual precipitation: 16 to 19 inches

Mean annual air temperature: 42 to 43 degrees F

Frost-free period: 70 to 90 days

Taxonomic class: Fine, montmorillonitic, frigid Typic Argixerolls

Typical Pedon

Manila silt loam in an area of Manila-Yago complex, 4 to 12 percent slopes; about 10 miles west of Malad City, in Oneida County, Idaho; about 1,000 feet east and 350 feet north of the southwest corner of sec. 27, T. 14 S., R. 34 E.

Ap—0 to 5 inches; brown (10YR 4/3) silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; 5 percent gravel; neutral (pH 7.2); clear smooth boundary.

BA—5 to 15 inches; brown (10YR 5/3) silty clay loam, dark brown (7.5YR 3/2) moist; weak medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine and fine roots; slightly alkaline (pH 7.4); clear wavy boundary.

Bt1—15 to 19 inches; brown (7.5YR 5/2) silty clay loam, brown (7.5YR 4/4) moist; moderate fine subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine and fine roots; 15 percent faint clay films on faces of peds and lining pores; 5 percent gravel; slightly alkaline (pH 7.4); clear wavy boundary.

Bt2—19 to 36 inches; brown (7.5YR 5/2) silty clay, dark yellowish brown (10YR 4/4)

moist; strong medium subangular blocky structure; very hard, very firm, very sticky and very plastic; few very fine and fine roots; 70 percent prominent clay films on faces of peds; 5 percent gravel; slightly alkaline (pH 7.6); clear wavy boundary.

Bt3—36 to 45 inches; light brown (7.5YR 6/4) silty clay, brown (7.5YR 5/4) moist; strong medium subangular blocky structure; hard, firm, very sticky and very plastic; few very fine roots; 70 percent prominent clay films on faces of peds; 5 percent gravel; slightly alkaline (pH 7.8); clear smooth boundary.

2Bk—45 to 60 inches; pink (7.5YR 8/4) silt loam, light brown (7.5YR 6/4) moist; massive; hard, firm, slightly sticky and slightly plastic; few very fine roots; 5 percent gravel; violently effervescent; moderately alkaline (pH 8.0).

Range in Characteristics

Profile:

Thickness of mollic epipedon—10 to 20 inches

Depth to secondary carbonates—45 to 60 inches or more

Particle-size control section (average):

Clay content—35 to 50 percent

Rock fragment content—0 to 5 percent

A and BA horizons:

Value—3 to 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bt horizon:

Hue—7.5YR or 10YR

Value—4 to 6 dry, 4 or 5 moist

Chroma—2 to 4 dry or moist

Texture—clay, silty clay loam, or silty clay

2Bk horizon:

Value—6 to 8 dry, 4 to 6 moist

Chroma—3 or 4 dry or moist

Texture—silt loam or loam

Calcium carbonate equivalent—10 to 25 percent

McCarey Series

Depth class: Moderately deep to bedrock (lithic)

Drainage class: Well drained

Permeability: Moderately slow

Landform: Undulating lava plains

Parent material: Kind—loess, alluvium, and residuum; source—basalt

Slope range: 4 to 40 percent

Elevation: 5,200 to 6,200 feet

Mean annual precipitation: 12 to 16 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 80 to 100 days

Taxonomic class: Fine-loamy, mixed, frigid Calcic Argixerolls

Typical Pedon

McCarey silt loam in an area of Hutchley-McCarey-Araveton complex, 4 to 40 percent slopes; about 1 mile north and 3 miles west of Holbrook, in Oneida County,

Idaho; about 2,400 feet east and 2,700 feet south of the northwest corner of sec. 28, T. 14 S., R. 32 E.

- A—0 to 8 inches; dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine to medium and few coarse roots; common very fine irregular pores and few fine tubular pores; 10 percent gravel; neutral (pH 7.3); clear wavy boundary.
- Bt—8 to 15 inches; grayish brown (10YR 5/2) silt loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; very hard, friable, moderately sticky and moderately plastic; few very fine to coarse roots; common very fine and few fine tubular pores; 10 percent stones; slightly alkaline (pH 7.4); many distinct clay films that are dark yellowish brown (10YR 3/4) moist and are on faces of peds and lining pores; clear wavy boundary.
- Btk—15 to 19 inches; pale brown (10YR 6/3) silt loam, dark yellowish brown (10YR 4/4) moist; moderate fine and medium subangular blocky structure; very hard, friable, slightly sticky and slightly plastic; few very fine to coarse roots; common very fine tubular pores; 40 percent faint clay films on faces of peds and lining pores; 5 percent cobbles and 8 percent stones; strongly effervescent; carbonate coatings on rock fragments; slightly alkaline (pH 7.8); clear wavy boundary.
- Bk—19 to 23 inches; very pale brown (10YR 8/3) cobbly silt loam, light yellowish brown (10YR 6/4) moist; weak very fine and fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine to coarse roots; few very fine tubular pores; 5 percent gravel, 15 percent cobbles, and 10 percent stones; violently effervescent; carbonate coatings on rock fragments; moderately alkaline (pH 8.0); clear wavy boundary.
- R—23 inches; slightly weathered basalt.

Range in Characteristics

Profile:

Thickness of mollic epipedon—10 to 20 inches
Depth to secondary carbonates—15 to 25 inches
Depth to bedrock—20 to 40 inches

Particle-size control section (average):

Clay content—23 to 27 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Bt and Btk horizons:

Value—5 or 6 dry, 3 to 5 moist
Chroma—2 to 4 dry or moist

Bk horizon:

Value—7 or 8 dry, 5 or 6 moist
Chroma—2 to 4 dry or moist
Calcium carbonate equivalent—5 to 25 percent

Mellor Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Slow

Landform: Lake terraces

Parent material: Kind—alluvium and lacustrine deposits; source—sedimentary rock

Slope range: 0 to 2 percent

Elevation: 4,400 to 4,600 feet

Mean annual precipitation: 8 to 12 inches

Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 100 to 110 days

Taxonomic class: Fine-silty, mixed, mesic Xeric Natrargids

Typical Pedon

Mellor silt loam in an area of Mellor-Freedom complex, 0 to 2 percent slopes; about 500 feet north of the Utah State line and 4 miles west of Interstate Highway 84, in Oneida County, Idaho; about 500 feet east and 500 feet north of the southwest corner of sec. 27, T. 16 S., R. 30 E.

E—0 to 4 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; moderate very thick platy structure parting to weak thin platy; soft, very friable, slightly sticky and slightly plastic; common very fine roots; many very fine vesicular pores; slightly effervescent; strongly alkaline (pH 8.5); abrupt smooth boundary.

Bt1—4 to 8 inches; pale brown (10YR 6/3) silty clay loam, brown (10YR 5/3) moist; moderate very coarse prismatic structure parting to strong fine and medium subangular blocky; hard, friable, moderately sticky and moderately plastic; few fine and common very fine roots; many very fine tubular pores; many faint clay films on faces of peds; strongly effervescent; 16 percent exchangeable sodium; strongly alkaline (pH 8.7); clear wavy boundary.

Bt2—8 to 16 inches; light gray (10YR 7/2) silty clay loam, pale brown (10YR 6/3) moist; moderate fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine roots; common very fine tubular pores; 40 percent faint clay films on faces of peds; strongly effervescent; 16 percent exchangeable sodium; strongly alkaline (pH 8.9); clear wavy boundary.

Bk1—16 to 27 inches; light gray (10YR 7/2) silt loam, pale brown (10YR 6/3) moist; moderate fine subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few very fine roots; few very fine tubular pores; violently effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

Bk2—27 to 44 inches; light gray (2.5Y 7/2) silt loam, grayish brown (2.5Y 5/2) moist; massive; very hard, firm, moderately sticky and moderately plastic; few very fine roots; few very fine tubular pores; few fine prominent strong brown (7.5YR 5/8) relict masses of iron accumulation; violently effervescent; strongly alkaline (pH 8.6); abrupt wavy boundary.

C—44 to 60 inches; light gray (2.5Y 7/2) silt loam, grayish brown (2.5Y 5/2) moist; massive; hard, firm, moderately sticky and moderately plastic; few very fine roots; few very fine tubular pores; common fine prominent strong brown (7.5YR 5/8) relict masses of iron accumulation; strongly effervescent; strongly alkaline (pH 8.6).

Range in Characteristics

Profile:

Thickness of ochric epipedon—4 to 9 inches

Particle-size control section (average):

Clay content—27 to 35 percent

E horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 to 4 dry or moist

B_{tn} horizon:

Value—5 to 7 dry, 4 to 6 moist

Chroma—2 to 4 dry or moist

Sodium adsorption ratio—15 to 25

B_k horizon:

Hue—7.5YR to 2.5Y

Value—5 to 8 dry, 4 to 6 moist

Chroma—2 to 4 dry or moist

Calcium carbonate equivalent—15 to 25 percent

C horizon:

Value—6 to 8 dry, 5 or 6 moist

Chroma—2 or 3 dry or moist

Neeley Series*Depth class:* Very deep (greater than 60 inches)*Drainage class:* Well drained*Permeability:* Moderate*Landform:* Lake terraces and fan remnants*Parent material:* Kind—loess and alluvium; source—mixed*Slope range:* 0 to 4 percent*Elevation:* 4,800 to 5,100 feet*Mean annual precipitation:* 11 to 13 inches*Mean annual air temperature:* 47 to 50 degrees F*Frost-free period:* 100 to 120 days*Taxonomic class:* Coarse-silty, mixed, mesic Calcic Haploxerolls**Typical Pedon**

Neeley silt loam, 0 to 4 percent slopes; about 1 mile north and 1 mile east of the junction of Interstate Highway 80 and Blackpine Valley Road, in Oneida County, Idaho; about 100 feet north and 200 feet west of the southeast corner of sec. 10, T. 15 S., R. 30 E.

A1—0 to 3 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate medium and thick platy structure parting to weak very fine granular; slightly hard, very friable, slightly sticky and slightly plastic; many very fine and few fine, medium, and coarse roots; many very fine irregular pores and common very fine tubular pores; slightly alkaline (pH 7.5); abrupt smooth boundary.

A2—3 to 7 inches; brown (10YR 5/3) silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine to coarse subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; many very fine irregular pores and common very fine tubular pores; slightly alkaline (pH 7.5); clear wavy boundary.

Bw—7 to 14 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; common fine and medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine and few fine to coarse roots; many very fine irregular pores and common very fine tubular pores; slightly alkaline (pH 7.6); few krotovina nodules; abrupt wavy boundary.

- Bk1—14 to 20 inches; light gray (10YR 7/2) silt loam, pale brown (10YR 6/3) moist; weak very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine to coarse roots; few fine irregular pores and common very fine tubular pores; violently effervescent; many very hard, firm carbonate nodules; moderately alkaline (pH 8.1); clear wavy boundary.
- Bk2—20 to 26 inches; pale yellow (2.5Y 8/2) silt loam, light brownish gray (2.5Y 6/2) moist; weak very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; few fine roots; common very fine and few fine tubular pores; violently effervescent; common very hard carbonate nodules that slake in water and in concentrated hydrochloric acid; strongly alkaline (pH 8.6); clear wavy boundary.
- C1—26 to 50 inches; light gray (2.5Y 7/2) silt loam, light brownish gray (2.5Y 6/2) moist; massive; slightly hard, friable, nonsticky and nonplastic; few fine roots; common very fine and few fine tubular pores; violently effervescent; strongly alkaline (pH 8.8); clear wavy boundary.
- C2—50 to 65 inches; light gray (2.5Y 7/2) silt loam, grayish brown (2.5Y 5/2) moist; massive; soft, very friable, slightly sticky and slightly plastic; few fine roots; common very fine and few fine tubular pores; strongly effervescent; strongly alkaline (pH 8.9).

Range in Characteristics

Profile:

Thickness of mollic epipedon—7 to 12 inches

Depth to calcic horizon—10 to 24 inches

Particle-size control section (average):

Clay content—10 to 18 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bw horizon:

Value—5 or 6 dry, 3 or 4 moist

Chroma—2 or 3 dry or moist

Bk horizon:

Hue—10YR or 2.5Y

Value—6 to 8 dry, 5 to 7 moist

Chroma—2 or 3 dry or moist

Calcium carbonate equivalent—15 to 30 percent

C horizon:

Value—7 or 8 dry, 5 or 6 moist

Chroma—2 or 3 dry or moist

Northwater Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Mountains

Parent material: Kind—colluvium and residuum; source—sandstone and other sedimentary rock

Slope range: 20 to 60 percent

Elevation: 5,600 to 7,700 feet

Mean annual precipitation: 20 to 25 inches

Mean annual air temperature: 39 to 42 degrees F

Frost-free period: 40 to 70 days

Taxonomic class: Loamy-skeletal, mixed Cryic Pachic Paleborolls

Typical Pedon

Northwater gravelly silt loam in an area of Hymas-Northwater-Clayburn association, 20 to 60 percent slopes; about 4 miles south of Samaria, in Oneida County, Idaho; about 550 feet east and 200 feet north of the southwest corner of sec. 12, T. 16 S., R. 35 E.; colors in this pedon description are for moist soil unless otherwise noted.

Oi—0 to 2 inches; slightly decomposed plant material consisting of Douglas fir needles and twigs.

A1—2 to 16 inches; very dark brown (10YR 2/2) gravelly silt loam, dark grayish brown (10YR 4/2) dry; weak very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine to coarse and few fine roots; few very fine tubular and irregular pores; 25 percent gravel; neutral (pH 7.3); abrupt wavy boundary.

A2—16 to 20 inches; dark brown (7.5YR 3/2) gravelly silt loam, grayish brown (10YR 5/2) dry; weak very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, medium, and coarse and few fine roots; few very fine tubular pores and common very fine irregular pores; 25 percent gravel; neutral (pH 7.3); abrupt wavy boundary.

A3—20 to 31 inches; very dark brown (10YR 2/2) very gravelly silt loam, dark grayish brown (10YR 4/2) dry; weak very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, medium, and coarse and few fine roots; few very fine tubular pores and common very fine irregular pores; 45 percent gravel and 10 percent cobbles; neutral (pH 7.3); clear wavy boundary.

Bt1—31 to 37 inches; brown (7.5YR 4/4) very gravelly loam, light yellowish brown (10YR 6/4) dry; weak very fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine, medium, and coarse and few fine roots; common very fine tubular pores; 15 percent faint clay films on faces of peds; 45 percent gravel and 5 percent cobbles; neutral (pH 7.2); abrupt wavy boundary.

Bt2—37 to 62 inches; brown (7.5YR 4/4) very gravelly clay loam, light yellowish brown (10YR 6/4) dry; moderate very fine subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few very fine roots; common very fine tubular and irregular pores; 40 percent distinct clay films on faces of peds and lining pores; 35 percent gravel and 15 percent cobbles; neutral (pH 7.2).

Range in Characteristics

Profile:

Thickness of mollic epipedon—20 to 35 inches

Depth to argillic horizon—24 inches or more

Particle-size control section (average):

Clay content—18 to 32 percent

Rock fragment content—35 to 50 percent

A horizon:

Hue—10YR or 7.5YR

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Texture—gravelly silt loam, very gravelly silt loam, or very gravelly loam

Bt horizon:

Hue—10YR or 7.5YR

Value—5 to 7 dry, 4 or 5 moist

Chroma—3 or 4 dry or moist

Texture—very gravelly loam or very gravelly clay loam

Obnot Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Very slow

Landform: Hills and fan remnants

Parent material: Kind—alluvium; source—quartzite

Slope range: 4 to 12 percent

Elevation: 5,000 to 6,000 feet

Mean annual precipitation: 15 to 18 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 80 to 95 days

Taxonomic class: Fine, montmorillonitic, frigid Typic Haploxererts

Typical Pedon

Obnot cobbly silty clay loam in an area of Manila-Obnot complex, 4 to 12 percent slopes (fig. 13); about 6 miles north of Malad City, in Oneida County, Idaho; about 500 feet east and 100 feet south of the northwest corner of sec. 19, T. 13 S., R. 37 E.



Figure 13.— Typical area of Obnot cobbly silty clay loam in an area of Manila-Obnot complex, 4 to 12 percent slopes, in foreground. Yago-Manila, 20 to 40 percent slopes, is in middle. Oxford Mountain is in background.

- A1—0 to 5 inches; dark grayish brown (10YR 4/2) cobbly silty clay loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure; soft, friable, moderately sticky and moderately plastic; few very fine and fine roots; many very fine and fine tubular pores; cracks 1.5 to 3.0 centimeters wide; 10 percent cobbles and 5 percent stones; slightly acid (pH 6.2); clear smooth boundary.
- A2—5 to 12 inches; dark grayish brown (10YR 4/2) silty clay, very dark grayish brown (10YR 3/2) moist; moderate medium subangular blocky structure parting to weak medium and fine subangular blocky; hard, firm, moderately sticky and moderately plastic; few very fine and fine roots; many very fine and fine tubular pores; cracks 1.5 to 3.0 centimeters wide; 5 percent cobbles; neutral (pH 6.6); clear wavy boundary.
- AB—12 to 19 inches; brown (7.5YR 5/4) silty clay, dark brown (7.5YR 3/4) moist; moderate medium subangular blocky structure parting to weak fine angular blocky; very hard, very firm, very sticky and very plastic; few very fine roots; common very fine and fine tubular pores; cracks 1.5 to 3.0 centimeters wide; 5 percent gravel; slightly acid (pH 6.2); clear smooth boundary.
- Bss1—19 to 24 inches; brown (7.5YR 5/4) silty clay, brown (7.5YR 4/4) moist; moderate coarse subangular blocky structure parting to moderate fine angular blocky; extremely hard, very firm, very sticky and very plastic; few very fine roots; few very fine tubular pores; cracks 1.5 to 3.0 centimeters wide; 15 percent intersecting slickensides; neutral (pH 7.2); clear smooth boundary.
- Bss2—24 to 31 inches; light brown (7.5YR 6/4) silty clay, brown (7.5YR 4/4) moist; weak coarse angular blocky structure parting to moderate medium platy; extremely hard, extremely firm, very sticky and very plastic; few very fine roots; few very fine tubular pores; cracks 1.5 to 3.0 centimeters wide; common intersecting slickensides; few wedge-shaped aggregates; 5 percent gravel; neutral (pH 7.0); clear smooth boundary.
- Bk1—31 to 34 inches; light brown (7.5YR 6/4) clay loam, brown (7.5YR 4/4) moist; moderate coarse subangular blocky structure; extremely hard, extremely firm, very sticky and very plastic; few very fine tubular pores; 5 percent gravel; slightly effervescent; slightly alkaline (pH 7.6); clear smooth boundary.
- Bk2—34 to 60 inches; pink (7.5YR 7/4) cobbly clay loam, brown (7.5YR 5/4) moist; massive; extremely hard, extremely firm, very sticky and very plastic; common very fine tubular pores; 10 percent cobbles and 5 percent stones; strongly effervescent; slightly alkaline (pH 7.8).

Range in Characteristics

Profile:

Thickness of mollic epipedon—12 to 23 inches
Depth to secondary carbonates—30 to 39 inches

Particle-size control section (average):

Clay content—40 to 55 percent
Rock fragment content—0 to 10 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist
Chroma—2 to 4 dry or moist (where chroma of 3 or more is present in the upper 12 inches, it accounts for less than 50 percent of the horizon color)

AB and Bss horizons:

Hue—10YR or 7.5YR
Value—5 or 6 dry, 4 or 5 moist

Chroma—3 or 4 dry or moist
Texture—silty clay or clay loam

Bk horizon:

Hue—10YR or 7.5YR
Value—6 or 7 dry, 4 or 5 moist
Chroma—3 or 4 dry or moist
Texture—cobbly clay loam or clay loam
Calcium carbonate equivalent—5 to 15 percent

Parehat Series

Depth class: Very deep (greater than 60 inches)
Drainage class: Somewhat poorly drained
Permeability: Moderate
Landform: Low stream terraces
Parent material: Kind—alluvium influenced by loess; source—mixed
Slope range: 0 to 2 percent
Elevation: 4,300 to 4,500 feet
Mean annual precipitation: 10 to 13 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 100 to 115 days
Taxonomic class: Fine-silty, mixed, mesic Fluvaquentic Haploxerolls

Typical Pedon

Parehat silt loam, 0 to 2 percent slopes; about 3 miles south of Malad City, in Oneida County, Idaho; about 2,500 feet north and 200 feet east of the southwest corner of sec. 3, T. 15 S., R. 36 E.

- A—0 to 6 inches; grayish brown (10YR 5/2) silt loam, black (10YR 2/1) moist; moderate fine subangular blocky structure parting to moderate medium granular; soft, friable, nonsticky and nonplastic; many very fine and fine roots; few medium and common very fine and fine tubular pores; slightly effervescent; slightly alkaline (pH 7.6); abrupt smooth boundary.
- AB—6 to 11 inches; brown (10YR 5/3) silt loam, very dark gray (10YR 3/1) moist; moderate fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; few medium and many very fine tubular pores; slightly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.
- Bw—11 to 21 inches; light brownish gray (2.5Y 6/2) silt loam, very dark grayish brown (2.5Y 3/2) moist; weak medium platy structure parting to weak medium subangular blocky; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common very fine and fine tubular pores; common fine prominent reddish yellow (7.5YR 7/6) masses of iron accumulation; strongly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.
- Ab—21 to 28 inches; grayish brown (10YR 5/2) silt loam, dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure parting to weak medium prismatic; hard, friable, moderately sticky and moderately plastic; few very fine roots; few medium and many very fine and fine tubular pores; slightly effervescent; slightly alkaline (pH 7.8); clear smooth boundary.
- Bk1—28 to 33 inches; light brownish gray (2.5Y 6/2) silt loam, dark grayish brown (2.5Y 4/2) moist; massive; hard, friable, moderately sticky and moderately plastic; few very fine roots; many very fine and fine tubular pores; 10 percent gravel; strongly effervescent; strongly alkaline (pH 8.6); clear smooth boundary.

- Bk2—33 to 42 inches; light brownish gray (2.5Y 6/2) silt loam, dark grayish brown (2.5Y 4/2) moist; massive; slightly hard, friable, moderately sticky and moderately plastic; few very fine roots; many very fine tubular pores; 10 percent gravel; strongly effervescent; few carbonate masses in matrix; moderately alkaline (pH 8.0); clear smooth boundary.
- C1—42 to 52 inches; light brownish gray (2.5Y 6/2) silt loam, grayish brown (2.5Y 5/2) moist; massive; hard, friable, moderately sticky and moderately plastic; strongly effervescent; moderately alkaline (pH 8.2); clear smooth boundary.
- C2—52 to 64 inches; light brownish gray (2.5Y 6/2) loam, grayish brown (2.5Y 5/2) moist; massive; hard, friable, moderately sticky and moderately plastic; many medium prominent olive yellow (5Y 6/6) masses of iron accumulation and few fine prominent strong brown (7.5YR 5/6) masses of iron accumulation; strongly effervescent; moderately alkaline (pH 8.2).

Range in Characteristics

Profile:

Thickness of mollic epipedon—7 to 19 inches

Depth to seasonal high water table—24 to 36 inches in April through July

Particle-size control section (average):

Clay content—19 to 26 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—1 to 3 dry or moist

Bk and C1 horizons:

Value—5 to 7 dry, 3 to 5 moist

Chroma—1 or 2 dry or moist

Calcium carbonate equivalent—10 to 15 percent

C2 horizon:

Value—5 to 7 dry, 3 to 5 moist

Chroma—1 or 2 dry or moist

Texture—silt loam or loam

Calcium carbonate equivalent—10 to 15 percent

Other Features

The Parehat soils in this survey area do not have a calcic horizon, which is outside the range for the official series. This difference, however, does not affect the use and management of the soils.

Parleys Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderately slow

Landform: Lake terraces

Parent material: Kind—lacustrine deposits; source—mixed

Slope range: 0 to 12 percent

Elevation: 4,400 to 5,200 feet

Mean annual precipitation: 14 to 15 inches

Mean annual air temperature: 46 to 50 degrees F

Frost-free period: 100 to 120 days

Taxonomic class: Fine-silty, mixed, mesic Calcic Argixerolls

Typical Pedon

Parleys silt loam, 0 to 2 percent slopes; about 1 mile north of Woodruff, in Oneida County, Idaho; about 50 feet south and 1,400 feet east of the northwest corner of sec. 15, T. 16 S., R. 36 E.

Ap—0 to 5 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak medium platy structure parting to moderate fine granular; soft, very friable, slightly sticky and slightly plastic; common very fine and fine roots; neutral (pH 7.2); clear smooth boundary.

Bt1—5 to 10 inches; grayish brown (10YR 5/2) silty clay loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine and fine roots; 40 percent faint clay films on faces of peds and lining pores; neutral (pH 7.2); abrupt wavy boundary.

Bt2—10 to 19 inches; grayish brown (10YR 5/2) silty clay loam, dark brown (10YR 3/3) moist; moderate fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine and few fine roots; 40 percent prominent clay films on faces of peds and lining pores; neutral (pH 7.2); clear wavy boundary.

Bt3—19 to 26 inches; brown (10YR 5/3) silty clay loam, brown (10YR 4/3) moist; moderate medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few very fine and fine roots; 40 percent distinct clay films on faces of peds and lining pores; slightly effervescent; slightly alkaline (pH 7.8); abrupt wavy boundary.

Bk1—26 to 38 inches; white (10YR 8/1) silt loam, light brownish gray (2.5Y 6/2) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; many fine and medium prominent strong brown (7.5YR 4/6) relict masses of iron accumulation; strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

Bk2—38 to 58 inches; light gray (5Y 7/1) silt loam, grayish brown (10YR 5/2) moist; massive; hard, friable, slightly sticky and slightly plastic; few fine prominent strong brown (7.5YR 5/6) relict masses of iron accumulation; strongly effervescent; many fine and medium irregular threads of secondary carbonates; moderately alkaline (pH 8.4); clear wavy boundary.

Bk3—58 to 64 inches; light gray (2.5Y 7/2) silt loam, light olive brown (2.5Y 5/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; many medium prominent strong brown (7.5YR 5/6) relict masses of iron accumulation; strongly effervescent; many fine and medium irregular threads of secondary carbonates; moderately alkaline (pH 8.4).

Range in Characteristics

Profile:

Thickness of mollic epipedon—10 to 20 inches

Depth to secondary carbonates—18 to 32 inches

Particle-size control section (average):

Clay content—27 to 35 percent

Ap horizon:

Value—3 to 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bt horizon:

Value—4 or 5 dry, 3 or 4 moist

Chroma—2 or 3 dry or moist

Bk horizon:

Hue—10YR to 5Y

Value—6 to 8 dry, 5 or 6 moist

Chroma—1 to 4 dry or moist

Texture—silt loam or loam

Calcium carbonate equivalent—15 to 40 percent

Pavohroo Series*Depth class:* Very deep (greater than 60 inches)*Drainage class:* Well drained*Permeability:* Moderately slow*Landform:* Mountains*Parent material:* Kind—alluvium, colluvium, and loess; source—sedimentary rock*Slope range:* 10 to 70 percent*Elevation:* 5,000 to 7,700 feet*Mean annual precipitation:* 20 to 25 inches*Mean annual air temperature:* 39 to 42 degrees F*Frost-free period:* 40 to 65 days*Taxonomic class:* Fine-loamy, mixed Pachic Cryoborolls**Typical Pedon**

Pavohroo gravelly silt loam in an area of Pavohroo-Povey association, 30 to 60 percent slopes; about 14 miles west and 4 miles north of Malad City, in Oneida County, Idaho; about 1,000 feet north of the southeast corner of sec. 31, T. 13 S., R. 34 E.; colors in this pedon description are for moist soil unless otherwise noted.

Oi—0 to 1 inch; slightly decomposed plant material consisting of leaves, twigs, grass, and roots.

A1—1 to 7 inches; very dark brown (10YR 2/2) gravelly silt loam, dark brown (10YR 3/3) dry; weak fine granular structure; soft, very friable, nonsticky and nonplastic; many very fine and fine and common medium and coarse roots; 15 percent gravel; neutral (pH 7.0); clear smooth boundary.

A2—7 to 16 inches; very dark grayish brown (10YR 3/2) silt loam, brown (10YR 4/3) dry; moderate fine and medium subangular blocky structure parting to weak fine granular; slightly hard, very friable, slightly sticky and slightly plastic; common very fine, fine, and medium and few coarse roots; 10 percent gravel; neutral (pH 7.0); clear smooth boundary.

Bw1—16 to 26 inches; dark brown (10YR 3/3) gravelly silt loam, brown (10YR 5/3) dry; moderate medium subangular blocky structure parting to weak fine subangular blocky; slightly hard, very friable, slightly sticky and slightly plastic; common fine and medium and few very fine roots; 20 percent gravel; neutral (pH 7.0); clear wavy boundary.

Bw2—26 to 39 inches; brown (10YR 4/3) gravelly silt loam, light yellowish brown (10YR 6/4) dry; weak medium subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; few very fine to medium roots; 20 percent gravel and 10 percent cobbles; neutral (pH 7.0); gradual wavy boundary.

C—39 to 61 inches; dark yellowish brown (10YR 4/4) gravelly clay loam, light yellowish brown (10YR 6/4) dry; massive; hard, very friable, moderately sticky and moderately plastic; few very fine roots; 30 percent gravel and 4 percent cobbles; neutral (pH 6.8).

Range in Characteristics

Profile:

Thickness of mollic epipedon—16 to 45 inches

Particle-size control section (average):

Clay content—19 to 25 percent

Rock fragment content—less than 35 percent

A horizon:

Value—3 or 4 dry, 1 to 3 moist

Chroma—1 or 2 dry or moist

Bw horizon:

Value—3 to 6 dry, 3 or 4 moist

Chroma—2 to 4 dry or moist

C horizon:

Value—5 or 6 dry

Chroma—2 to 4 dry or moist

Pollynot Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderately slow

Landform: Fan remnants and lake terraces

Parent material: Kind—alluvium; source—sedimentary rock

Slope range: 4 to 12 percent

Elevation: 4,300 to 5,000 feet

Mean annual precipitation: 14 to 16 inches

Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 100 to 120 days

Taxonomic class: Fine-loamy, mixed, mesic Calcic Argixerolls

Typical Pedon

Pollynot silt loam in an area of Samaria-Pollynot complex, 4 to 12 percent slopes; about 2 miles west of Samaria, in Oneida County, Idaho; about 2,770 feet south and 1,020 feet west of the northeast corner of sec. 9, T. 15 S., R. 35 E.

Ap—0 to 7 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure parting to moderate fine granular; hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; few fine and very fine tubular pores; 2 percent gravel; slightly alkaline (pH 7.6); clear wavy boundary.

Bt—7 to 17 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine and few fine roots; common very fine and few fine tubular pores; 15 percent faint clay films lining pores; 2 percent gravel; slightly alkaline (pH 7.6); gradual wavy boundary.

Bk1—17 to 33 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; weak fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine roots; few very fine and fine tubular pores; 5 percent gravel; strongly effervescent; few fine irregular threads of secondary carbonates; slightly alkaline (pH 7.8); gradual wavy boundary.

Bk2—33 to 41 inches; pale brown (10YR 6/3) loam, brown (10YR 4/3) moist; massive;

hard, friable, slightly sticky and slightly plastic; few very fine and fine tubular pores; 10 percent gravel; strongly effervescent; common fine and medium irregular threads of secondary carbonates in matrix and common fine coatings of secondary carbonates on rock fragments; slightly alkaline (pH 7.8); gradual wavy boundary.

2Bk3—41 to 56 inches; light gray (10YR 7/2) very gravelly sandy loam, brown (10YR 5/3) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine tubular pores; 55 percent gravel; strongly effervescent; common fine and medium irregular threads of secondary carbonates in matrix and common fine coatings of secondary carbonates on rock fragments; moderately alkaline (pH 8.0); gradual wavy boundary.

2Bk4—56 to 60 inches; light gray (10YR 7/2) extremely gravelly loam, brown (10YR 5/3) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine tubular pores; 65 percent gravel; strongly effervescent; common fine and medium irregular threads of secondary carbonates in matrix and common fine coatings of secondary carbonates on rock fragments; moderately alkaline (pH 8.0).

Range in Characteristics

Profile:

Thickness of mollic epipedon—10 to 17 inches

Thickness of argillic horizon—10 to 19 inches

Particle-size control section (average):

Clay content—18 to 26 percent

Ap horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bt horizon:

Value—4 or 5 dry, 3 or 4 moist

Chroma—2 to 4 dry or moist

Bk1 and Bk2 horizons:

Value—6 or 7 dry, 4 or 5 moist

Chroma—3 or 4 dry or moist

Texture—silt loam or loam

Calcium carbonate equivalent—5 to 25 percent

2Bk3 and 2Bk4 horizons:

Value—6 or 7 dry, 4 or 5 moist

Chroma—2 or 3 dry or moist

Texture—very gravelly sandy loam or extremely gravelly loam

Rock fragment content—35 to 70 percent

Calcium carbonate equivalent—15 to 35 percent

Other Features

The Pollynnot soils in this survey area are slightly shallower to secondary carbonates than is the official series. Also, the particle-size control section is 18 to 26 percent clay, which is less than that of the official series. These differences, however, do not affect the use and management of the soils.

Povey Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Mountains

Parent material: Kind—colluvium; source—sandstone and limestone

Slope range: 10 to 70 percent

Elevation: 5,600 to 7,700 feet

Mean annual precipitation: 16 to 24 inches

Mean annual air temperature: 39 to 41 degrees F

Frost-free period: 60 to 70 days

Taxonomic class: Loamy-skeletal, mixed Pachic Cryoborolls

Typical Pedon

Povey gravelly loam in an area of Povey-Pavohroo association, 30 to 60 percent slopes; about 12 miles west and 8 miles north of Holbrook, in Oneida County, Idaho; about 100 feet south and 250 feet east of the northwest corner of sec. 30, T. 13 S., R. 31 E.; colors in this pedon description are for moist soil unless otherwise noted.

- A1—0 to 5 inches; very dark grayish brown (10YR 3/2) gravelly loam, dark grayish brown (10YR 4/2) dry; weak fine and very fine subangular blocky structure parting to weak fine granular; soft, very friable, slightly sticky and slightly plastic; many very fine and common fine to coarse roots; many very fine and common fine tubular pores; 25 percent gravel and 8 percent cobbles; neutral (pH 7.3); clear smooth boundary.
- A2—5 to 12 inches; very dark grayish brown (10YR 3/2) very cobbly loam, grayish brown (10YR 5/2) dry; weak very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine to medium and few coarse roots; common very fine tubular and interstitial pores; 25 percent gravel and 20 percent cobbles; neutral (pH 7.2); gradual wavy boundary.
- Bw1—12 to 20 inches; dark brown (10YR 3/3) very cobbly loam, brown (10YR 5/3) dry; weak very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine to coarse roots; common very fine tubular and interstitial pores; 25 percent gravel and 25 percent cobbles; neutral (pH 7.2); clear wavy boundary.
- Bw2—20 to 35 inches; dark yellowish brown (10YR 3/4) very gravelly sandy loam, yellowish brown (10YR 5/4) dry; weak very fine and fine subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine to coarse roots; common very fine tubular and interstitial pores; 40 percent gravel and 10 percent cobbles; neutral (pH 7.1); clear wavy boundary.
- BC—35 to 60 inches; brown (7.5YR 4/4) extremely gravelly sandy loam, brown (7.5YR 5/4) dry; weak fine subangular blocky structure; soft, very friable, slightly sticky and nonplastic; common very fine and fine roots and few medium and coarse roots; many very fine irregular pores and few very fine interstitial pores; 40 percent gravel and 25 percent cobbles; neutral (pH 7.2).

Range in Characteristics

Profile:

Thickness of mollic epipedon—16 to 40 inches

Particle-size control section (average):

Clay content—10 to 18 percent

Rock fragment content—35 to 65 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—1 to 3 dry or moist

Bw horizon:

Value—3 to 5 dry, 3 or 4 moist

Chroma—3 or 4 dry, 1 to 4 moist

Texture—very cobbly loam, very gravelly sandy loam, extremely gravelly sandy loam, or extremely gravelly loam

BC horizon:

Value—4 or 5 dry, 3 or 4 moist

Chroma—2 to 4 dry or moist

Povirt Series*Depth class:* Very deep (greater than 60 inches)*Drainage class:* Poorly drained*Permeability:* Very slow*Landform:* Relict lakebeds*Parent material:* Kind—lacustrine deposits; source—limestone, quartzite, sandstone, and tuff*Slope range:* 0 to 2 percent*Elevation:* 4,900 to 5,200 feet*Mean annual precipitation:* 14 to 18 inches*Mean annual air temperature:* 42 to 45 degrees F*Frost-free period:* 80 to 100 days*Taxonomic class:* Fine, montmorillonitic (calcareous), frigid Vertic Epiaquepts**Typical Pedon**

Povirt silty clay loam, 0 to 2 percent slopes; about 14 miles southwest of Malad City, in Oneida County, Idaho; about 1,700 feet south and 600 feet east of the northwest corner of sec. 3, T. 16 S., R. 34 E.; colors in this pedon description are for moist soil unless otherwise noted.

Ap—0 to 10 inches; brown (10YR 5/3) silty clay loam, light brownish gray (10YR 6/2) dry; moderate medium subangular blocky structure; slightly hard, firm, very sticky and very plastic; few very fine roots; common very fine tubular pores; 0.5-inch-wide cracks that extend through the horizon; slightly effervescent; moderately alkaline (pH 7.9); abrupt smooth boundary.

Bg—10 to 20 inches; dark grayish brown (10YR 4/2) silty clay, light brownish gray (10YR 6/2) dry; strong medium and coarse subangular blocky structure; hard, firm, very sticky and very plastic; few fine roots; common very fine tubular pores; 0.5-inch-wide cracks that extend through the horizon; few fine prominent reddish brown (2.5YR 5/4) masses of iron accumulation; slightly effervescent; moderately alkaline (pH 8.3); clear wavy boundary.

Bkng1—20 to 27 inches; dark grayish brown (10YR 4/2) silty clay, light brownish gray (10YR 6/2) dry; strong medium prismatic structure; very hard, very firm, very sticky and very plastic; few very fine roots; common very fine tubular pores; 0.3-inch-wide cracks that extend to base of horizon; few fine prominent reddish brown (2.5YR 5/4) masses of iron accumulation; slightly effervescent; few fine masses of secondary carbonates; strongly alkaline (pH 8.6); clear wavy boundary.

Bkng2—27 to 45 inches; grayish brown (10YR 5/2) silty clay, very pale brown (10YR

7/3) dry; strong medium subangular blocky structure; very hard, very firm, very sticky and very plastic; few very fine roots; common very fine tubular pores; few fine prominent red (2.5YR 5/6) masses of iron accumulation; slightly effervescent; common coarse masses of secondary carbonates; strongly alkaline (pH 8.8); clear wavy boundary.

Bkng3—45 to 60 inches; grayish brown (10YR 5/2) silty clay, light gray (10YR 7/1) dry; strong medium and coarse subangular blocky structure; very hard, very firm, very sticky and very plastic; common very fine tubular pores; many fine prominent red (2.5YR 5/6) masses of iron accumulation; slightly effervescent; many coarse masses of secondary carbonates; strongly alkaline (pH 8.8).

Range in Characteristics

Profile:

Soil moisture content—saturated for 1 to 3 months in spring during most years

Description of cracks—0.5 to 1.0 inch wide, 20 to 30 inches deep, and 15 to 40 inches long

Depth of seasonal perched water table—12 inches above the surface to a depth of 18 inches below the surface in April through June

Particle-size control section (average):

Clay content—40 to 60 percent

Ap horizon:

Value—5 to 7 dry, 4 to 6 moist

Chroma—1 to 3 dry or moist

Bg horizon:

Value—6 or 7 dry, 4 or 5 moist

Chroma—1 to 3 dry or moist

Bkng horizon:

Value—6 to 8 dry, 4 or 5 moist

Chroma—1 to 3 dry or moist

Calcium carbonate equivalent—5 to 20 percent

Sodium adsorption ratio—10 to 30

Preston Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Excessively drained

Permeability: Rapid

Landform: Dunes on lake terraces

Parent material: Kind—eolian sand; source—mixed

Slope range: 3 to 12 percent

Elevation: 4,500 to 4,800 feet

Mean annual precipitation: 13 to 16 inches

Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 110 to 130 days

Taxonomic class: Mixed, mesic Typic Xeropsamments

Typical Pedon

Preston fine sand in an area of Kidman-Preston association, 2 to 12 percent slopes; about 4.5 miles west of Malad City, in Oneida County, Idaho; about 1,850 feet north and 200 feet east of the southwest corner of sec. 14, T. 14 S., R. 35 E.

A—0 to 3 inches; grayish brown (10YR 5/2) fine sand, very dark grayish brown (10YR

3/2) moist; single grain; loose, nonsticky and nonplastic; few fine and very fine roots; many very fine interstitial pores; slightly alkaline (pH 7.4); abrupt smooth boundary.

AC—3 to 17 inches; grayish brown (10YR 5/2) fine sand, very dark grayish brown (10YR 3/2) moist; massive; soft, very friable, nonsticky and nonplastic; many fine and very fine roots; many very fine interstitial pores; slightly alkaline (pH 7.6); clear wavy boundary.

C1—17 to 36 inches; pale brown (10YR 6/3) fine sand, brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; many fine and very fine roots; many very fine interstitial pores; slightly alkaline (pH 7.6); clear wavy boundary.

C2—36 to 65 inches; pale brown (10YR 6/3) fine sand, brown (10YR 4/3) moist; massive; soft, very friable, nonsticky and nonplastic; few fine and very fine roots; many very fine interstitial pores; slightly alkaline (pH 7.8).

Range in Characteristics

Profile:

Depth to calcareous material—40 to 60 inches or more

Particle-size control section (average):

Clay content—0 to 5 percent

A and AC horizons:

Value—4 or 5 dry, 3 or 4 moist

Chroma—2 or 3 dry or moist

Other features—low chroma in A horizon is result of dark sand grains

C horizon:

Value—5 or 6 dry, 4 or 5 moist

Chroma—3 or 4 dry or moist

Pyrat Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Fan remnants and lake terraces

Parent material: Kind—alluvium and lacustrine deposits; source—limestone and other sedimentary rock

Slope range: 2 to 30 percent

Elevation: 4,400 to 5,000 feet

Mean annual precipitation: 8 to 12 inches

Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 100 to 120 days

Taxonomic class: Loamy-skeletal, mixed, mesic Durinodic Xeric Haplocalcids

Typical Pedon

Pyrat gravelly silt loam in an area of Darkbull-Pyrat-Ecur complex, 2 to 30 percent slopes; about 6 miles south of Juniper, in Oneida County, Idaho; about 50 feet north and 3,600 feet west of the southeast corner of sec. 6, T. 16 S., R. 30 E.

A—0 to 9 inches; pale brown (10YR 6/3) gravelly silt loam, brown (10YR 4/3) moist; moderate fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; many fine and very fine roots; common very fine tubular pores; 15 percent gravel; strongly effervescent; 1-millimeter-thick coatings of secondary carbonates on underside of rock fragments; 7 percent

calcium carbonate equivalent; strongly alkaline (pH 8.6); gradual smooth boundary.

- Bk1—9 to 14 inches; pale brown (10YR 6/3) gravelly silt loam, dark yellowish brown (10YR 4/4) moist; strong fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine and fine roots; common fine tubular pores; 20 percent gravel; violently effervescent; 2-millimeter-thick coatings of secondary carbonates on underside of rock fragments; 8 percent calcium carbonate equivalent; strongly alkaline (pH 8.6); clear smooth boundary.
- Bk2—14 to 20 inches; pale brown (10YR 6/3) very gravelly sandy loam, brown (10YR 4/3) moist; moderate fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; few very fine tubular pores; 45 percent gravel; violently effervescent; 2-millimeter-thick coatings of secondary carbonates on underside of rock fragments; 10 percent calcium carbonate equivalent; strongly alkaline (pH 8.7); clear smooth boundary.
- Bk3—20 to 25 inches; very pale brown (10YR 7/3) very gravelly sandy loam, brown (10YR 5/3) moist; massive; hard, friable, slightly sticky and slightly plastic; few very fine roots; few fine tubular pores; 55 percent gravel; violently effervescent; 2-millimeter-thick coatings of secondary carbonates on underside of rock fragments; 15 percent calcium carbonate equivalent; strongly alkaline (pH 8.8); abrupt smooth boundary.
- Bkq—25 to 33 inches; light gray (10YR 7/2) extremely gravelly sandy loam, pale brown (10YR 6/3) moist; massive; very hard, very firm and brittle, nonsticky and nonplastic; few very fine roots; few fine tubular pores; 75 percent gravel; violently effervescent; 2-millimeter-thick coatings of secondary carbonates on rock fragments; discontinuous weak cementation with secondary silica and carbonates in matrix; 25 percent calcium carbonate equivalent; strongly alkaline (pH 8.8); clear smooth boundary.
- Ck1—33 to 43 inches; very pale brown (10YR 7/3) extremely gravelly sandy loam, pale brown (10YR 6/3) moist; massive; hard, friable, nonsticky and nonplastic; few very fine roots; many fine tubular pores; 70 percent gravel and 10 percent cobbles; violently effervescent; 1-millimeter-thick coatings of secondary carbonates on rock fragments; 30 percent calcium carbonate equivalent; strongly alkaline (pH 8.9); clear smooth boundary.
- Ck2—43 to 65 inches; very pale brown (10YR 7/3) extremely gravelly loamy sand, pale brown (10YR 6/3) moist; single grain; loose, nonsticky and nonplastic; few very fine roots; many fine irregular pores; 75 percent gravel and 5 percent cobbles; strongly effervescent; 1-millimeter-thick coatings of secondary carbonates on rock fragments; 30 percent calcium carbonate equivalent; strongly alkaline (pH 9.0).

Range in Characteristics

Profile:

Depth to discontinuous, weakly cemented material—22 to 32 inches

Particle-size control section (average):

Clay content—5 to 18 percent

Rock fragment content—35 to 80 percent

A and Bk1 horizons:

Value—6 or 7 dry, 3 or 4 moist

Chroma—2 to 4 dry or moist

Calcium carbonate equivalent—5 to 10 percent

Bk2 and Bk3 horizons:

Value—6 or 7 dry, 4 to 6 moist

Chroma—2 or 3 dry or moist

Calcium carbonate equivalent—10 to 30 percent

Bkq horizon:

Value—6 or 7 dry, 5 or 6 moist

Chroma—2 or 3 dry or moist

Texture—very gravelly sandy loam or extremely gravelly sandy loam

Calcium carbonate equivalent—10 to 30 percent

Ck horizon:

Value—6 or 7 dry, 5 or 6 moist

Chroma—2 or 3 dry or moist

Texture—very gravelly sandy loam, extremely gravelly sandy loam, or extremely gravelly loamy sand

Calcium carbonate equivalent—10 to 30 percent

Raldrige Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderately slow

Landform: Hills

Parent material: Kind—loess and alluvium; source—mixed and basalt

Slope range: 4 to 12 percent

Elevation: 4,600 to 5,100 feet

Mean annual precipitation: 12 to 16 inches

Mean annual air temperature: 47 to 49 degrees F

Frost-free period: 120 to 130 days

Taxonomic class: Fine-loamy, mixed, mesic Calcic Pachic Argixerolls

Typical Pedon

Raldrige gravelly loam, 4 to 12 percent slopes; about 1 mile south of Samaria, in Oneida County, Idaho; about 300 feet east and 2,350 feet north of the southwest corner of sec. 25, T. 15 S., R. 35 E.

A—0 to 3 inches; dark grayish brown (10YR 4/2) gravelly loam, very dark brown (10YR 2/2) moist; weak very thin and thin platy structure; soft, very friable, slightly sticky and slightly plastic; many very fine and fine roots and few medium roots; common very fine irregular pores and many very fine and fine tubular pores; 20 percent gravel; slightly alkaline (pH 7.4); clear wavy boundary.

Bt1—3 to 7 inches; dark grayish brown (10YR 4/2) gravelly silty clay loam, very dark grayish brown (10YR 3/2) moist; weak very fine and fine subangular blocky structure; hard, very friable, moderately sticky and moderately plastic; many very fine, common fine, and few medium roots; common very fine tubular pores; 40 percent faint clay films on faces of peds; 20 percent gravel; slightly alkaline (pH 7.6); clear wavy boundary.

Bt2—7 to 14 inches; dark grayish brown (10YR 4/2) gravelly silty clay loam, very dark grayish brown (10YR 3/2) moist; moderate very fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine and fine and few medium roots; common very fine and fine tubular pores; 40 percent distinct clay films on faces of peds and lining pores; 15 percent gravel and 5 percent cobbles; slightly alkaline (pH 7.8); clear wavy boundary.

Bt3—14 to 22 inches; grayish brown (10YR 5/2) very gravelly clay loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine and fine roots and few medium roots; common very fine tubular pores; 15 percent faint clay films on

faces of peds and lining pores; 40 percent gravel and 5 percent cobbles; moderately alkaline (pH 8.0); abrupt wavy boundary.

Bk1—22 to 35 inches; light gray (10YR 7/2) very gravelly loam, pale brown (10YR 6/3) moist; massive; hard, friable, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; 50 percent gravel and 5 percent cobbles; violently effervescent; common coatings of secondary carbonates on rock fragments; moderately alkaline (pH 8.0); gradual wavy boundary.

Bk2—35 to 60 inches; very pale brown (10YR 8/2) very gravelly loam, light yellowish brown (10YR 6/4) moist; massive; hard, friable, slightly sticky and slightly plastic; few very fine tubular pores; 50 percent gravel and 5 percent cobbles; violently effervescent; common coatings of secondary carbonates on rock fragments; moderately alkaline (pH 8.2).

Range in Characteristics

Profile:

Thickness of mollic epipedon—20 to 25 inches

Depth to secondary carbonates—22 to 36 inches

Particle-size control section (average):

Clay content—27 to 35 percent

Rock fragment content—20 to 30 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bt horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Texture—gravelly silty clay loam or very gravelly clay loam

Bk horizon:

Value—6 to 8 dry, 3 to 6 moist

Chroma—2 to 4 dry or moist

Calcium carbonate equivalent—15 to 25 percent

Rexburg Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Fan remnants and hills

Parent material: Kind—loess and alluvium; source—mixed

Slope range: 1 to 30 percent

Elevation: 5,100 to 5,900 feet

Mean annual precipitation: 13 to 16 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 80 to 100 days

Taxonomic class: Coarse-silty, mixed, frigid Calcic Haploxerolls

Typical Pedon

Rexburg silt loam in an area of Ririe-Rexburg complex, 4 to 12 percent slopes; about 8 miles north and 5 miles west of Holbrook, in Oneida County, Idaho; about 1,300 feet west and 100 feet north of the southeast corner of sec. 18, T. 13 S., R. 32 E.

- Ap—0 to 11 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine and few fine roots; many very fine irregular pores; slightly alkaline (pH 7.4); abrupt smooth boundary.
- AB—11 to 14 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak medium subangular blocky structure parting to moderate fine granular; slightly hard, very friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine tubular and irregular pores; slightly alkaline (pH 7.4); clear smooth boundary.
- Bw—14 to 22 inches; brown (10YR 5/3) silt loam, brown (10YR 4/3) moist; weak fine and medium subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; few very fine roots; common very fine and few fine tubular pores; slightly alkaline (pH 7.6); clear wavy boundary.
- Bk—22 to 39 inches; light gray (10YR 7/2) silt loam, light yellowish brown (10YR 6/4) moist; weak fine subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; strongly effervescent; common fine and medium threads and masses of secondary carbonates; moderately alkaline (pH 8.0); clear wavy boundary.
- C—39 to 60 inches; very pale brown (10YR 7/3) silt loam, yellowish brown (10YR 5/4) moist; massive; soft, very friable, slightly sticky and slightly plastic; common very fine tubular pores; strongly effervescent; slightly alkaline (pH 7.8).

Range in Characteristics

Profile:

Thickness of mollic epipedon—12 to 15 inches
Depth to secondary carbonates—18 to 35 inches

Particle-size control section (average):

Clay content—12 to 18 percent

Ap and AB horizons:

Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Bw horizon:

Value—5 or 6 dry, 3 or 4 moist
Chroma—2 or 3 dry or moist

Bk and C horizons:

Value—6 or 7 dry, 4 to 6 moist
Chroma—2 to 4 dry or moist
Texture—silt loam or silt
Calcium carbonate equivalent—15 to 30 percent

Ridgecrest Taxadjunct

Depth class: Moderately deep to bedrock (lithic)

Drainage class: Well drained

Permeability: Moderate

Landform: Mountains

Parent material: Kind—colluvium; source—limestone

Slope range: 12 to 70 percent

Elevation: 5,200 to 7,000 feet

Mean annual precipitation: 14 to 18 inches

Mean annual air temperature: 42 to 46 degrees F

Frost-free period: 70 to 90 days

Taxonomic class: Loamy-skeletal, carbonatic, frigid Typic Calcixerolls

Typical Pedon

Ridgecrest very gravelly silt loam in an area of Ridgecrest-Hondoho complex, 30 to 60 percent slopes; about 12 miles west and 11 miles north of Malad City, in Oneida County, Idaho; about 2,560 feet east and 1,250 feet north of the southwest corner of sec. 29, T. 12 S., R. 34 E.

A—0 to 4 inches; grayish brown (10YR 5/2) very gravelly silt loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure parting to weak very fine granular; soft, very friable, slightly sticky and slightly plastic; many very fine and common fine to coarse roots; few very fine tubular pores and many very fine irregular pores; 35 percent gravel and 10 percent cobbles; slightly effervescent; slightly alkaline (pH 7.5); abrupt wavy boundary.

Bk1—4 to 9 inches; grayish brown (10YR 5/2) very gravelly silt loam, very dark grayish brown (10YR 3/2) moist; weak very fine and fine subangular blocky structure parting to very fine granular; soft, very friable, slightly sticky and slightly plastic; common very fine to coarse roots; common very fine and fine tubular pores and common very fine irregular pores; 30 percent gravel and 10 percent cobbles; slightly effervescent; few coatings of secondary carbonates on underside of rock fragments; slightly alkaline (pH 7.6); abrupt wavy boundary.

Bk2—9 to 13 inches; grayish brown (10YR 5/2) very cobbly silt loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure parting to weak very fine and fine granular; soft, very friable, slightly sticky and slightly plastic; common very fine to coarse roots; common very fine tubular and irregular pores; 15 percent gravel and 40 percent cobbles; slightly effervescent; few coatings of secondary carbonates on underside of rock fragments; 20 percent calcium carbonate equivalent; slightly alkaline (pH 7.8); clear wavy boundary.

Bk3—13 to 21 inches; yellowish brown (10YR 5/4) very cobbly loam, brown (10YR 4/3) moist; weak very fine to medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and coarse and few fine and medium roots; common very fine tubular pores and few very fine irregular pores; 15 percent gravel and 40 percent cobbles; slightly effervescent; common coatings of secondary carbonates on rock fragments; 25 percent calcium carbonate equivalent; moderately alkaline (pH 7.9); gradual wavy boundary.

Bk4—21 to 31 inches; light yellowish brown (10YR 6/4) very cobbly loam, brown (10YR 5/3) moist; weak very fine and fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; common very fine to coarse roots; few very fine tubular pores and many very fine irregular pores; 15 percent gravel and 40 percent cobbles; strongly effervescent; common coatings of secondary carbonates on rock fragments; 45 percent calcium carbonate equivalent; moderately alkaline (pH 8.2); abrupt irregular boundary.

Bk5—31 to 35 inches; very pale brown (10YR 8/3) extremely cobbly sandy loam, light yellowish brown (10YR 6/4) moist; massive; soft, very friable, slightly sticky and slightly plastic; few very fine roots; many very fine irregular pores; 20 percent gravel and 65 percent cobbles; violently effervescent; many coatings of secondary carbonates on rock fragments; 60 percent calcium carbonate equivalent; moderately alkaline (pH 8.3); abrupt irregular boundary.

R—35 inches; highly fractured limestone.

Range in Characteristics

Profile:

Thickness of mollic epipedon—7 to 16 inches
Depth to secondary carbonates—0 to 4 inches
Depth to bedrock—20 to 40 inches

Particle-size control section (average):

Clay content—12 to 17 percent
Coarse fragment content—55 to 85 percent
Calcium carbonate equivalent—25 to 70 percent; 40 to 85 percent in less than 20-millimeter fraction

A horizon:

Value—4 or 5 dry, 2 or 3 moist
Chroma—2 or 3 dry or moist

Bk horizon:

Value—5 to 8 dry, 3 to 6 moist
Chroma—2 to 4 dry or moist
Texture—very cobbly loam, very cobbly silt loam, very gravelly silt loam, or extremely cobbly sandy loam
Calcium carbonate equivalent—15 to 70 percent

Taxadjunct Feature

The Ridgecrest soils in this survey area have a calcic horizon, which is outside the range for the official series. This difference, however, does not affect the use and management of the soils.

Ririe Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Hills and fan remnants

Parent material: Kind—loess and alluvium; source—mixed

Slope range: 2 to 30 percent

Elevation: 5,000 to 5,800 feet

Mean annual precipitation: 12 to 17 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 70 to 100 days

Taxonomic class: Coarse-silty, mixed, frigid Calcic Haploxerolls

Typical Pedon

Ririe silt loam in an area of Ririe-Rexburg complex, 4 to 12 percent slopes; about 3.5 miles west of Holbrook, in Oneida County, Idaho; about 1,400 feet west and 800 feet south of the northeast corner of sec. 33, T. 14 S., R. 32 E.

A—0 to 6 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak thin to thick platy structure; slightly hard, very friable, slightly sticky and slightly plastic; common very fine to medium and few coarse roots; common very fine tubular pores and many very fine irregular pores; 2 percent gravel; slightly alkaline (pH 7.4); abrupt smooth boundary.

AB—6 to 14 inches; brown (10YR 5/3) silt loam, dark brown (10YR 3/3) moist; weak medium and coarse subangular blocky structure; slightly hard, friable, slightly

sticky and slightly plastic; common very fine to medium and few coarse roots; common very fine tubular and irregular pores; few cicada krotovinas; 2 percent gravel; slightly alkaline (pH 7.5); abrupt wavy boundary.

Bk1—14 to 31 inches; very pale brown (10YR 7/3) silt loam, light yellowish brown (10YR 6/4) moist; massive; hard, firm, slightly sticky and slightly plastic; common very fine roots and few fine and medium roots; common very fine tubular pores; 15 to 20 percent cicada krotovinas; 2 percent gravel; strongly effervescent; coatings of secondary carbonates on krotovinas; moderately alkaline (pH 8.3); clear wavy boundary.

Bk2—31 to 46 inches; light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine to medium roots; common very fine tubular pores and few very fine interstitial pores; few cicada krotovinas; 2 percent gravel; strongly effervescent; coatings of secondary carbonates on krotovinas; moderately alkaline (pH 8.0); gradual wavy boundary.

Bk3—46 to 63 inches; light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; massive; hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; common very fine and few fine tubular pores; 2 percent gravel; strongly effervescent; coatings of secondary carbonates on underside of rock fragments; moderately alkaline (pH 8.1).

Range in Characteristics

Profile:

Thickness of mollic epipedon—8 to 15 inches

Depth to secondary carbonates—7 to 16 inches

Particle-size control section (average):

Clay content—12 to 18 percent

A and AB horizons:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bk horizon:

Value—6 or 7 dry, 4 to 6 moist

Chroma—1 to 4 dry or moist

Calcium carbonate equivalent—15 to 35 percent

Samaria Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Lake terraces and fan remnants

Parent material: Kind—lacustrine deposits and alluvium; source—mixed

Slope range: 0 to 12 percent

Elevation: 4,500 to 5,300 feet

Mean annual precipitation: 12 to 16 inches

Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 100 to 120 days

Taxonomic class: Fine-loamy, mixed, mesic Typic Calcixerolls

Typical Pedon

Samaria silt loam in an area of Samaria-Sterling complex, 4 to 12 percent slopes;

about 11 miles south of Malad City, in Oneida County, Idaho; about 2,500 feet east and 1,250 feet north of the southwest corner of sec. 11, T. 16 S., R. 36 E.

A—0 to 5 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium platy structure parting to weak very fine and fine granular; soft, very friable, slightly sticky and slightly plastic; common very fine to medium and few coarse roots; common very fine and fine tubular pores; 10 percent gravel; slightly effervescent; slightly alkaline (pH 7.8); abrupt smooth boundary.

Bk1—5 to 16 inches; brown (10YR 5/3) gravelly silt loam, dark brown (10YR 3/3) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine to medium and few coarse roots; common very fine and fine tubular pores; 15 percent gravel; slightly effervescent; common coatings of secondary carbonates on rock fragments; moderately alkaline (pH 8.1); abrupt wavy boundary.

Bk2—16 to 19 inches; light brownish gray (10YR 6/2) gravelly loam, dark grayish brown (10YR 4/2) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine to medium and few coarse roots; common very fine and fine tubular pores; 20 percent gravel; strongly effervescent; common coatings of secondary carbonates on rock fragments; moderately alkaline (pH 8.1); abrupt wavy boundary.

Bk3—19 to 27 inches; very pale brown (10YR 8/2) gravelly loam, light brownish gray (10YR 6/2) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine to medium and few coarse roots; common very fine and fine tubular pores; 25 percent gravel; violently effervescent; common coatings of secondary carbonates on rock fragments; moderately alkaline (pH 8.2); clear wavy boundary.

Bk4—27 to 51 inches; light gray (10YR 7/2) gravelly sandy loam, brown (10YR 5/3) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine to coarse roots; common fine tubular pores; 30 percent gravel and 2 percent cobbles; violently effervescent; common coatings of secondary carbonates on rock fragments; moderately alkaline (pH 8.4); abrupt wavy boundary.

Bk5—51 to 64 inches; very pale brown (10YR 7/3) gravelly sandy loam, brown (10YR 5/3) moist; massive; soft, very friable, slightly sticky and slightly plastic; few very fine to medium roots; few very fine tubular pores; 15 percent gravel and 5 percent cobbles; violently effervescent; common coatings of secondary carbonates on rock fragments; moderately alkaline (pH 8.4).

Range in Characteristics

Profile:

Thickness of mollic epipedon—15 to 18 inches

Depth to calcic horizon—5 to 17 inches

Particle-size control section (average):

Clay content—18 to 20 percent

Rock fragment content—15 to 35 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bk horizon:

Value—5 to 8 dry, 3 to 6 moist

Chroma—2 or 3 dry or moist

Texture—gravelly silt loam, gravelly loam, or gravelly sandy loam
 Calcium carbonate equivalent—10 to 40 percent

Sterling Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Fan remnants and hills

Parent material: Kind—alluvium; source—mixed

Slope range: 4 to 25 percent

Elevation: 4,500 to 5,500 feet

Mean annual precipitation: 12 to 14 inches

Mean annual air temperature: 46 to 49 degrees F

Frost-free period: 100 to 120 days

Taxonomic class: Loamy-skeletal, mixed, mesic Typic Calcixerolls

Typical Pedon

Sterling very gravelly loam, 12 to 20 percent slopes; about 7 miles south and 4 miles east of Malad City, in Oneida County, Idaho; about 1,625 feet north and 1,625 feet west of the southeast corner of sec. 25, T. 16 S., R. 36 E.

- A1—0 to 5 inches; brown (10YR 5/3) very gravelly loam, very dark grayish brown (10YR 3/2) moist; weak very fine granular structure; soft, very friable, slightly sticky and slightly plastic; many very fine, common fine, and few medium and coarse roots; 40 percent gravel, 15 percent cobbles, and 1 percent stones; slightly effervescent; slightly alkaline (pH 7.7); abrupt smooth boundary.
- A2—5 to 13 inches; brown (10YR 5/3) very gravelly loam, dark brown (10YR 3/3) moist; weak fine subangular blocky structure; soft, very friable, slightly sticky and slightly plastic; many very fine, common fine, and few medium and coarse roots; 40 percent gravel and 15 percent cobbles; slightly effervescent; slightly alkaline (pH 7.7); clear wavy boundary.
- Bk1—13 to 22 inches; pale brown (10YR 6/3) very gravelly loam, brown (10YR 4/3) moist; weak fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; 35 percent gravel, 10 percent cobbles, and 1 percent stones; strongly effervescent; slightly alkaline (pH 7.8); clear wavy boundary.
- Bk2—22 to 55 inches; pale brown (10YR 6/3) very gravelly loam, brown (10YR 4/3) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine and few fine and medium roots; 40 percent gravel and 10 percent cobbles; strongly effervescent; common coatings of secondary carbonates on rock fragments and common fine irregular threads of secondary carbonates; moderately alkaline (pH 7.9); clear wavy boundary.
- Bk3—55 to 66 inches; very pale brown (10YR 7/3) very gravelly loam, brown (10YR 5/3) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine and fine roots; 35 percent gravel and 5 percent cobbles; violently effervescent; common coatings of secondary carbonates on rock fragments and many fine irregular threads of secondary carbonates; moderately alkaline (pH 8.0).

Range in Characteristics

Profile:

Thickness of mollic epipedon—10 to 18 inches

Depth to calcic horizon—7 to 17 inches

Particle-size control section (average):

Clay content—10 to 22 percent

Rock fragment content—35 to 70 percent

A horizon:

Value—3 to 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bk horizon:

Value—5 to 7 dry, 4 to 6 moist

Chroma—2 to 4 dry or moist

Texture—very gravelly loam or extremely gravelly loam

Calcium carbonate equivalent—10 to 40 percent

Stines Series*Depth class:* Very deep (greater than 60 inches)*Drainage class:* Well drained*Permeability:* Moderately rapid*Landform:* Mountains*Parent material:* Kind—alluvium and residuum; source—rhyolitic tuff*Slope range:* 10 to 40 percent*Elevation:* 6,300 to 6,700 feet*Mean annual precipitation:* 16 to 18 inches*Mean annual air temperature:* 42 to 44 degrees F*Frost-free period:* 70 to 80 days*Taxonomic class:* Ashy-skeletal, frigid Vitrandic Haploxerolls**Typical Pedon**

Stines gravelly loam in an area of Pavohroo-Stines-Lonigan association, 10 to 40 percent slopes; about 2 miles north of Dairy Creek, in Oneida County, Idaho; about 850 feet north and 3,000 feet west of the southeast corner of sec. 16, T. 11 S., R. 35 E.

A—0 to 13 inches; dark grayish brown (10YR 4/2) gravelly loam, very dark grayish brown (10YR 3/2) moist; moderate fine granular structure; soft, very friable, nonsticky and nonplastic; common very fine and few fine and medium roots; 25 percent gravel and 5 percent cobbles; slightly alkaline (pH 7.5); clear wavy boundary.

Bw—13 to 24 inches; pale brown (10YR 6/3) very gravelly loam, brown (10YR 5/3) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and slightly plastic; few very fine to medium roots; 35 percent gravel and 15 percent cobbles; slightly alkaline (pH 7.6); clear wavy boundary.

Bk—24 to 44 inches; light gray (10YR 7/2) very gravelly sandy loam, light brownish gray (10YR 6/2) moist; massive; slightly hard, very friable, nonsticky and nonplastic; few very fine and fine roots; 35 percent gravel, 15 percent cobbles, and 5 percent stones; strongly effervescent; few masses of secondary carbonates in matrix and few medium coatings of secondary carbonates on rock fragments; moderately alkaline (pH 8.0); clear wavy boundary.

C—44 to 60 inches; light gray (10YR 7/2) extremely cobbly loamy sand, light brownish gray (10YR 6/2) moist; single grain; loose, nonsticky and nonplastic; few very fine roots; 30 percent gravel, 40 percent cobbles, and 10 percent stones; slightly effervescent; moderately alkaline (pH 8.0).

Range in Characteristics

Profile:

Thickness of mollic epipedon—10 to 15 inches

Depth to secondary carbonates—5 to 24 inches

Particle-size control section (average):

Clay content—7 to 15 percent

Rock fragment content—35 to 55 percent

Volcanic glass content—more than 60 percent

A horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bw horizon:

Value—5 or 6 dry, 3 to 5 moist

Chroma—2 or 3 dry or moist

Texture—very gravelly loam, very gravelly sandy loam, or very cobbly loam

Bk horizon:

Value—6 or 7 dry, 5 or 6 moist

Chroma—2 or 3 dry or moist

Calcium carbonate equivalent—10 to 20 percent

C horizon:

Value—6 or 7 dry or moist

Chroma—2 or 3 dry or moist

Other Features

The Stines soils in this survey area have a mollic epipedon that is slightly thinner than is typical for the official series. Also, the depth to secondary carbonates in these soils is slightly less than is typical for the official series. These differences, however, do not affect the use and management of the soils.

Thatcher Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderately slow

Landform: Fan remnants

Parent material: Kind—alluvium; source—mixed

Slope range: 4 to 30 percent

Elevation: 4,700 to 5,900 feet

Mean annual precipitation: 13 to 16 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 80 to 100 days

Taxonomic class: Fine-silty, mixed, frigid Calcic Argixerolls

Typical Pedon

Thatcher silt loam, 4 to 12 percent slopes; about 3 miles west and 6 miles north of Malad City, in Oneida County, Idaho; about 1,800 feet west and 500 feet north of the southeast corner of sec. 30, T. 13 S., R. 36 E.

Ap—0 to 7 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; slightly hard, very friable,

slightly sticky and slightly plastic; common very fine roots; many very fine irregular pores; neutral (pH 7.3); abrupt smooth boundary.

Bt1—7 to 16 inches; yellowish brown (10YR 5/4) silty clay loam, dark brown (10YR 3/3) moist; moderate medium angular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine roots; many very fine tubular pores; 40 percent distinct clay films on faces of peds and lining pores; slightly alkaline (pH 7.5); gradual smooth boundary.

Bt2—16 to 35 inches; light yellowish brown (10YR 6/4) silty clay loam, brown (10YR 4/3) moist; moderate medium and coarse prismatic structure; hard, friable, moderately sticky and moderately plastic; few very fine roots; many very fine tubular pores; 40 percent distinct clay films on faces of peds and lining pores; slightly alkaline (pH 7.6); gradual wavy boundary.

Bk1—35 to 45 inches; light yellowish brown (10YR 6/4) silt loam, dark yellowish brown (10YR 4/4) moist; moderate medium and coarse subangular blocky structure; hard, friable, moderately sticky and moderately plastic; few very fine roots; many very fine tubular pores; strongly effervescent; slightly alkaline (pH 7.8); common fine masses of secondary carbonates; gradual wavy boundary.

Bk2—45 to 60 inches; pale brown (10YR 6/3) silt loam, dark yellowish brown (10YR 4/4) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; common very fine tubular pores; violently effervescent; common fine masses of secondary carbonates; 20 percent calcium carbonate equivalent; moderately alkaline (pH 8.0).

Range in Characteristics

Profile:

Thickness of mollic epipedon—10 to 16 inches

Depth to calcic horizon—25 to 40 inches

Particle-size control section (average):

Clay content—28 to 35 percent

Ap horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bt horizon:

Value—5 or 6 dry, 3 or 4 moist

Chroma—3 or 4 dry or moist

Texture—silty clay loam or clay loam

Bk horizon:

Value—6 or 7 dry, 4 to 6 moist

Chroma—3 or 4 dry or moist

Texture—silt loam, fine sandy loam, or loam

Calcium carbonate equivalent—15 to 25 percent

Tickason Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Fan remnants

Parent material: Kind—alluvium; source—sedimentary rock

Slope range: 0 to 4 percent

Elevation: 4,400 to 5,000 feet

Mean annual precipitation: 11 to 13 inches

Mean annual air temperature: 47 to 49 degrees F

Frost-free period: 100 to 130 days

Taxonomic class: Coarse-loamy, mixed, mesic Calcic Haploxerolls

Typical Pedon

Tickason very fine sandy loam, 0 to 2 percent slopes; about 5 miles south of Holbrook, in Oneida County, Idaho; about 2,200 feet east and 1,300 feet north of the southwest corner of sec. 7, T. 15 S., R. 33 E.

Ap—0 to 10 inches; grayish brown (10YR 5/2) very fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak fine granular structure; soft, very friable, nonsticky and nonplastic; few very fine to coarse roots; slightly alkaline (pH 7.4); clear wavy boundary.

Bw1—10 to 18 inches; pale brown (10YR 6/3) fine sandy loam, dark brown (10YR 3/3) moist; weak medium and moderate fine subangular blocky structure; hard, very friable, slightly sticky and nonplastic; few very fine to coarse roots; slightly alkaline (pH 7.6); clear wavy boundary.

Bw2—18 to 23 inches; pale brown (10YR 6/3) fine sandy loam, brown (10YR 4/3) moist; weak fine prismatic structure parting to moderate medium subangular blocky; hard, very friable, slightly sticky and slightly plastic; few very fine to coarse roots; slightly effervescent; slightly alkaline (pH 7.6); clear wavy boundary.

Bk1—23 to 31 inches; very pale brown (10YR 8/3) very fine sandy loam, pale brown (10YR 6/3) moist; weak medium subangular blocky structure; hard, very friable, slightly sticky and slightly plastic; few very fine to coarse roots; strongly effervescent; strongly alkaline (pH 8.6); clear wavy boundary.

Bk2—31 to 38 inches; very pale brown (10YR 7/3) fine sandy loam, brown (10YR 5/3) moist; massive; hard, friable, nonsticky and nonplastic; few very fine to coarse roots; strongly effervescent; 20 to 25 percent secondary carbonate nodules; slightly alkaline (pH 7.8); abrupt wavy boundary.

Bk3—38 to 60 inches; very pale brown (10YR 7/3) loam, pale brown (10YR 6/3) moist; massive; hard, friable, slightly sticky and slightly plastic; few prominent black (10YR 2/1) masses of manganese accumulation and organic stains; violently effervescent; many medium and coarse irregular threads and masses of secondary carbonates; 15 to 25 percent carbonate nodules; strongly alkaline (pH 8.6).

Range in Characteristics

Profile:

Thickness of mollic epipedon—10 to 13 inches

Depth to calcic horizon—12 to 23 inches

Particle-size control section (average):

Clay content—10 to 18 percent

Ap horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bw and Bk1 horizons:

Value—5 or 6 dry, 3 or 4 moist

Chroma—2 or 3 dry or moist

Texture—fine sandy loam, very fine sandy loam, or loam

Calcium carbonate equivalent—15 to 25 percent

Bk2 and Bk3 horizons:

Value—7 or 8 dry, 5 or 6 moist

Chroma—2 to 4 dry or moist
Texture—loam or fine sandy loam
Calcium carbonate equivalent—15 to 25 percent

Tirod Series

Depth class: Very deep (greater than 60 inches)
Drainage class: Well drained
Permeability: Moderately slow
Landform: Fan remnants and lake terraces
Parent material: Kind—alluvium and lacustrine deposits; source—quartzite
Slope range: 0 to 2 percent
Elevation: 4,300 to 5,000 feet
Mean annual precipitation: 12 to 14 inches
Mean annual air temperature: 46 to 48 degrees F
Frost-free period: 100 to 130 days
Taxonomic class: Fine-loamy, mixed, mesic Calcic Argixerolls

Typical Pedon

Tirod silt loam, 0 to 2 percent slopes; about 0.75 mile north of Malad City, in Oneida County, Idaho; about 1,300 feet south and 30 feet east of the northwest corner of sec. 16, T. 14 S., R. 36 E.

- Ap—0 to 9 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine and medium subangular blocky structure parting to moderate fine granular; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; 5 percent gravel; neutral (pH 7.1); abrupt smooth boundary.
- A—9 to 18 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; moderate fine and medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common very fine and fine and few medium and coarse roots; 10 percent gravel; neutral (pH 7.2); abrupt wavy boundary.
- Bt1—18 to 30 inches; light brownish gray (10YR 6/2) loam, dark brown (10YR 3/3) moist; moderate medium and coarse angular blocky structure; hard, firm, moderately sticky and moderately plastic; common very fine and few fine and medium roots; 40 percent distinct clay films on faces of peds and lining pores; 10 percent gravel; neutral (pH 7.1); clear wavy boundary.
- Bt2—30 to 40 inches; pale brown (10YR 6/3) clay loam, brown (10YR 4/3) moist; weak medium prismatic structure parting to moderate medium and coarse angular blocky; hard, firm, moderately sticky and moderately plastic; common very fine and few fine and medium roots; 70 percent distinct clay films on faces of peds and lining pores; 10 percent gravel; neutral (pH 7.1); abrupt wavy boundary.
- Bk—40 to 62 inches; very pale brown (10YR 8/2) loam, light yellowish brown (2.5Y 6/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine to medium roots; 10 percent gravel; strongly effervescent; common medium coatings of secondary carbonates on rock fragments; common fine and medium irregular threads of secondary carbonates; moderately alkaline (pH 7.9).

Range in Characteristics

Profile:
Thickness of mollic epipedon—10 to 19 inches
Thickness of argillic horizon—19 to 30 inches
Depth to calcic horizon—35 to 43 inches

Particle-size control section (average):

Clay content—20 to 27 percent

Rock fragment content—5 to 10 percent

Ap and A horizons:

Hue—10YR or 7.5YR

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bt horizon:

Hue—10YR or 7.5YR

Value—4 to 6 dry, 3 or 4 moist

Chroma—2 to 4 dry or moist

Texture—loam or clay loam

Bk horizon:

Hue—10YR or 2.5Y

Value—6 to 8 dry, 4 to 6 moist

Chroma—2 to 4 dry or moist

Calcium carbonate equivalent—15 to 25 percent

Toefoot Series*Depth class:* Very deep (greater than 60 inches)*Drainage class:* Well drained*Permeability:* Moderate*Landform:* Stream terraces and toeslopes*Parent material:* Kind—alluvium; source—mixed*Slope range:* 0 to 4 percent*Elevation:* 5,000 to 5,400 feet*Mean annual precipitation:* 13 to 17 inches*Mean annual air temperature:* 42 to 44 degrees F*Frost-free period:* 80 to 100 days*Taxonomic class:* Coarse-loamy, mixed, frigid Cumulic Haploxerolls***Typical Pedon***

Toefoot silt loam, 0 to 4 percent slopes; about 8 miles west and 13 miles north of Malad City, in Oneida County, Idaho; about 900 feet west and 1,200 feet south of the northeast corner of sec. 18, T. 12 S., R. 35 E.

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) silt loam, black (10YR 2/1) moist; moderate fine granular structure; soft, very friable, slightly sticky and slightly plastic; common very fine and fine and few medium roots; common fine and few medium tubular pores; 8 percent gravel; neutral (pH 7.3); abrupt smooth boundary.

A—6 to 11 inches; grayish brown (10YR 5/2) silt loam, very dark brown (10YR 2/2) moist; weak fine subangular blocky structure parting to moderate medium granular; slightly hard, very friable, slightly sticky and slightly plastic; few very fine to medium roots; few fine tubular pores; slightly alkaline (pH 7.4); abrupt smooth boundary.

Bw—11 to 14 inches; grayish brown (10YR 5/2) silt loam, very dark grayish brown (10YR 3/2) moist; weak fine subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; few very fine to medium roots; few fine tubular pores; slightly effervescent; slightly alkaline (pH 7.5); abrupt smooth boundary.

Akb—14 to 26 inches; grayish brown (10YR 5/2) silt loam, very dark gray (10YR 3/1) moist; weak medium granular structure; slightly hard, very friable, slightly sticky and nonplastic; common very fine and few fine and medium roots; few fine and medium tubular pores; 4 percent gravel; strongly effervescent; many fine masses and threads of secondary carbonates; moderately alkaline (pH 7.9); clear wavy boundary.

Bk1—26 to 33 inches; light brownish gray (10YR 6/2) gravelly loam, dark grayish brown (10YR 4/2) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine and few fine and medium roots; few fine and medium tubular pores; 15 percent gravel; strongly effervescent; moderately alkaline (pH 8.0); abrupt wavy boundary.

Bk2—33 to 40 inches; light brownish gray (10YR 6/2) very gravelly sandy loam, dark grayish brown (10YR 4/2) moist; massive; soft, very friable, nonsticky and nonplastic; common very fine and few fine and medium roots; few fine and medium tubular pores; 40 percent gravel; strongly effervescent; common medium coatings of secondary carbonates on underside of rock fragments; moderately alkaline (pH 8.0); abrupt wavy boundary.

2Bk3—40 to 50 inches; light brownish gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) moist; massive; soft, very friable, slightly sticky and slightly plastic; common very fine and few fine and medium roots; few fine and medium tubular pores; 8 percent gravel; slightly effervescent; common fine threads of secondary carbonates; few fine silica-coated pockets of volcanic ash throughout; moderately alkaline (pH 8.0); clear smooth boundary.

2C—50 to 62 inches; pale brown (10YR 6/3) silt loam, dark brown (10YR 3/3) moist; massive; soft, very friable, slightly sticky and slightly plastic; few very fine and fine roots; few fine tubular pores; slightly effervescent; moderately alkaline (pH 8.0).

Range in Characteristics

Profile:

Thickness of mollic epipedon—20 to 31 inches

Depth to secondary carbonates—7 to 11 inches

Particle-size control section (average):

Clay content—13 to 17 percent

Ap and A horizons:

Value—4 or 5 dry, 2 or 3 moist

Chroma—1 or 2 dry or moist

Bw horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—1 to 3 dry or moist

Akb horizon:

Value—4 or 5 dry, 2 or 3 moist

Chroma—1 or 2 dry or moist

Bk and 2Bk horizons:

Value—5 or 6 dry, 3 or 4 moist

Chroma—1 to 3 dry or moist

Texture—gravelly loam, very gravelly sandy loam, or silt loam

Calcium carbonate equivalent—10 to 20 percent

2C horizon:

Value—5 or 6 dry, 3 or 4 moist

Chroma—2 to 4 dry or moist

Watercanyon Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Fan remnants and hills

Parent material: Kind—loess and alluvium; source—mixed

Slope range: 4 to 30 percent

Elevation: 5,000 to 5,900 feet

Mean annual precipitation: 12 to 16 inches

Mean annual air temperature: 42 to 45 degrees F

Frost-free period: 80 to 115 days

Taxonomic class: Coarse-silty, mixed, frigid Calcixerollic Xerochrepts

Typical Pedon

Watercanyon silt loam in an area of Ririe-Watercanyon complex, 4 to 12 percent slopes; about 3 miles north of Daniels Reservoir, in Oneida County, Idaho; about 1,000 feet west and 1,600 feet north of the southeast corner of sec. 14, T. 12 S., R. 34 E.

Ap—0 to 5 inches; pale brown (10YR 6/3) silt loam, brown (10YR 4/3) moist; weak fine granular structure; slightly hard, very friable, slightly sticky and nonplastic; few very fine and fine roots; slightly alkaline (pH 7.4); clear smooth boundary.

Bw—5 to 11 inches; pale brown (10YR 6/3) silt loam, brown (10YR 5/3) moist; weak fine and medium subangular blocky structure; very hard, very friable, slightly sticky and nonplastic; few fine and very fine roots; strongly effervescent; about 3 percent hard, cemented cicada krotovinas that have coatings of secondary carbonates; moderately alkaline (pH 7.9); gradual smooth boundary.

Bk1—11 to 13 inches; very pale brown (10YR 7/3) silt loam, pale brown (10YR 6/3) moist; massive; very hard, very friable, slightly sticky and nonplastic; few very fine roots; strongly effervescent; moderately alkaline (pH 8.0); 15 to 20 percent nodules that are extremely hard and have coatings of secondary carbonates; few coatings of secondary carbonates on faces of peds; clear smooth boundary.

Bk2—13 to 33 inches; very pale brown (10YR 8/3) silt loam, pale brown (10YR 6/3) moist; massive; very hard, very friable, slightly sticky and nonplastic; strongly effervescent; moderately alkaline (pH 8.2); gradual wavy boundary.

Bk3—33 to 51 inches; very pale brown (10YR 7/3) very fine sandy loam, brown (10YR 5/3) moist; massive; soft, very friable, nonsticky and nonplastic; strongly effervescent; moderately alkaline (pH 8.4); gradual wavy boundary.

Bkq—51 to 62 inches; very pale brown (10YR 7/3) very fine sandy loam, brown (10YR 5/3) moist; massive; extremely hard, friable, nonsticky and nonplastic; discontinuous, very weak cementation with secondary carbonates and silica; slightly effervescent; strongly alkaline (pH 8.6).

Range in Characteristics

Profile:

Depth to secondary carbonates—4 to 17 inches

Particle-size control section (average):

Clay content—8 to 16 percent

Ap horizon:

Value—5 or 6 dry, 3 or 4 moist

Chroma—2 or 3 dry or moist

Bw horizon:

Value—5 or 6 dry, 4 or 5 moist

Chroma—3 or 4 dry or moist

Bk horizon:

Value—6 to 8 dry, 4 to 6 moist

Chroma—2 or 3 dry or moist

Texture—silt loam, very fine sandy loam, or silt

Calcium carbonate equivalent—15 to 35 percent

Other Features

The Watercanyon soils in this survey area are more calcareous closer to the surface than is typical for the official series. This difference, however, does not affect the use and management of the soils.

Welby Series*Depth class:* Very deep (greater than 60 inches)*Drainage class:* Well drained*Permeability:* Moderate*Landform:* Lake terraces*Parent material:* Kind—lacustrine deposits; source—limestone and sandstone*Slope range:* 0 to 12 percent*Elevation:* 4,700 to 5,000 feet*Mean annual precipitation:* 12 to 16 inches*Mean annual air temperature:* 47 to 49 degrees F*Frost-free period:* 110 to 130 days*Taxonomic class:* Coarse-silty, mixed, mesic Typic Calcixerolls**Typical Pedon**

Welby silt loam in an area of Welby-Parleys complex, 0 to 2 percent slopes; about 0.5 mile north of Holbrook, in Oneida County, Idaho; about 1,600 feet east and 250 feet north of the southwest corner of sec. 30, T. 14 S., R. 33 E.

Ap—0 to 5 inches; brown (10YR 5/3) silt loam, very dark grayish brown (10YR 3/2) moist; strong thin platy structure; hard, very friable, slightly sticky and slightly plastic; many very fine and few fine roots; common fine tubular pores; slightly effervescent; moderately alkaline (pH 7.9); clear smooth boundary.

A—5 to 11 inches; brown (10YR 5/3) silt loam, very dark grayish brown (10YR 3/2) moist; strong coarse subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few fine roots; common fine tubular pores; slightly effervescent; moderately alkaline (pH 7.9); gradual smooth boundary.

Bk1—11 to 19 inches; very pale brown (10YR 7/3) silt loam, pale brown (10YR 6/3) moist; weak fine granular structure; hard, friable, slightly sticky and slightly plastic; common fine roots; few fine tubular pores; violently effervescent; strongly alkaline (pH 9.0); clear smooth boundary.

Bk2—19 to 26 inches; very pale brown (10YR 8/2) silt loam, pale brown (10YR 6/3) moist; moderate fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few fine roots; few fine tubular pores; strongly effervescent; strongly alkaline (pH 9.0); gradual smooth boundary.

Bk3—26 to 36 inches; very pale brown (10YR 8/2) silt loam, pale brown (10YR 6/3) moist; massive; hard, friable, slightly sticky and slightly plastic; few fine roots; few fine tubular pores; violently effervescent; strongly alkaline (pH 8.6); gradual smooth boundary.

Bk4—36 to 60 inches; very pale brown (10YR 8/2) fine sandy loam, pale brown (10YR 6/3) moist; massive; hard, friable, slightly sticky and slightly plastic; violently effervescent; moderately alkaline (pH 8.4).

Range in Characteristics

Profile:

Thickness of mollic epipedon—7 to 19 inches

Particle-size control section (average):

Clay content—10 to 18 percent

Ap and A horizons:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bk horizon:

Value—6 to 8 dry, 4 to 6 moist

Chroma—2 or 3 dry or moist

Texture—silt loam or loam with fine sandy loam at a depth of more than 36 inches

Calcium carbonate equivalent—10 to 35 percent

Wheelon Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderately slow

Landform: Lake terraces

Parent material: Kind—lacustrine deposits; source—mixed

Slope range: 4 to 12 percent

Elevation: 4,900 to 5,200 feet

Mean annual precipitation: 14 to 16 inches

Mean annual air temperature: 46 to 48 degrees F

Frost-free period: 110 to 120 days

Taxonomic class: Fine-silty, mixed, mesic Calcixerollic Xerochrepts

Typical Pedon

Wheelon silt loam in an area of Parleys-Wheelon complex, 4 to 12 percent slopes; about 4 miles north and 2 miles west of Malad City, in Oneida County, Idaho; about 2,500 feet east and 1,850 feet north of the southwest corner of sec. 36, T. 13 S., R. 35 E.

Ap—0 to 8 inches; pale brown (10YR 6/3) silt loam, dark grayish brown (10YR 4/2) moist; moderate medium and coarse subangular blocky structure; slightly hard, very friable, moderately sticky and moderately plastic; many very fine and common fine roots; many very fine tubular pores; 2 percent gravel; strongly effervescent; moderately alkaline (pH 8.2); abrupt wavy boundary.

Bw—8 to 14 inches; very pale brown (10YR 7/3) silt loam, pale brown (10YR 6/3) moist; weak fine subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine roots; common very fine tubular pores; 1 percent gravel; strongly effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

Bk1—14 to 20 inches; very pale brown (10YR 7/3) silt loam, pale brown (10YR 6/3) moist; weak fine subangular blocky structure; slightly hard, friable, moderately sticky and moderately plastic; common very fine roots; common very fine tubular pores; 2 percent gravel; strongly effervescent; common fine irregular masses and

threads of secondary carbonates; strongly alkaline (pH 8.6); gradual wavy boundary.

Bk2—20 to 30 inches; very pale brown (10YR 7/3) silty clay loam, brown (10YR 5/3) moist; massive; slightly hard, friable, moderately sticky and moderately plastic; few very fine roots; common very fine tubular pores; common fine prominent yellowish red (5YR 5/8) relict masses of iron accumulation; 1 percent gravel; strongly effervescent; common fine irregular masses and threads of secondary carbonates; strongly alkaline (pH 8.7); gradual wavy boundary.

C1—30 to 45 inches; very pale brown (10YR 7/3) silty clay loam, brown (10YR 5/3) moist; massive; slightly hard, friable, moderately sticky and moderately plastic; common very fine tubular pores; common fine prominent yellowish brown (10YR 5/6) relict masses of iron accumulation; strongly effervescent; strongly alkaline (pH 8.5); gradual wavy boundary.

C2—45 to 60 inches; very pale brown (10YR 7/3) silt loam, brown (10YR 5/3) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; common very fine tubular pores; common fine prominent yellowish brown (10YR 5/6) relict masses of iron accumulation; strongly effervescent; strongly alkaline (pH 8.5).

Range in Characteristics

Profile:

Depth to secondary carbonates—8 to 16 inches

Particle-size control section (average):

Clay content—18 to 30 percent

Ap horizon:

Value—6 or 7 dry, 3 to 5 moist

Chroma—1 to 3 dry or moist

Bw horizon:

Value—6 or 7 dry

Chroma—2 or 3 dry or moist

Texture—silt loam or silty clay loam

Bk and C horizons:

Value—7 or 8 dry, 5 or 6 moist

Chroma—2 or 3 dry or moist

Texture—silt loam or silty clay loam

Calcium carbonate equivalent—10 to 35 percent

Other Features

The Wheelon soils in this survey area have a weakly developed Bw horizon, which is outside the range for the official series. This difference, however, does not affect the use and management of the soils.

Wursten Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Moderate

Landform: Fan remnants

Parent material: Kind—alluvium; source—mixed

Slope range: 4 to 15 percent

Elevation: 5,300 to 5,700 feet

Mean annual precipitation: 12 to 16 inches

Mean annual air temperature: 42 to 46 degrees F

Frost-free period: 75 to 100 days

Taxonomic class: Coarse-loamy, mixed, frigid Typic Calcixerolls

Typical Pedon

Wursten gravelly silt loam, 4 to 15 percent slopes; about 15 miles north and 3 miles east of Holbrook, in Oneida County, Idaho; about 1,050 feet east and 900 feet north of the southwest corner of sec. 16, T. 12 S., R. 33 E.

Ap—0 to 7 inches; grayish brown (10YR 5/2) gravelly silt loam, very dark grayish brown (10YR 3/2) moist; moderate thin and medium platy structure; slightly hard, very friable, slightly sticky and nonplastic; common very fine and fine roots; many very fine and fine and few medium tubular pores; 20 percent gravel; slightly effervescent; moderately alkaline (pH 8.4); abrupt wavy boundary.

A—7 to 16 inches; grayish brown (10YR 5/2) gravelly silt loam, dark brown (10YR 3/3) moist; moderate fine subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; common very fine and fine roots; many very fine and fine and few medium tubular pores; 25 percent gravel; slightly effervescent; moderately alkaline (pH 8.4); clear wavy boundary.

Bk1—16 to 28 inches; very pale brown (10YR 8/3) gravelly loam, pale brown (10YR 6/3) moist; weak fine and medium subangular blocky structure; slightly hard, very friable, slightly sticky and nonplastic; few very fine roots; common very fine and few fine tubular pores; 30 percent gravel; violently effervescent; strongly alkaline (pH 9.0); gradual wavy boundary.

Bk2—28 to 38 inches; very pale brown (10YR 8/3) gravelly loam, very pale brown (10YR 7/4) moist; massive; slightly hard, very friable, slightly sticky and nonplastic; common very fine and fine tubular pores; 20 percent gravel; violently effervescent; strongly alkaline (pH 9.0); clear wavy boundary.

Bk3—38 to 56 inches; very pale brown (10YR 8/3) gravelly loam, light yellowish brown (10YR 6/4) moist; massive; slightly hard, very friable, slightly sticky and nonplastic; common very fine and fine tubular pores; 15 percent gravel; violently effervescent; strongly alkaline (pH 9.0); gradual wavy boundary.

Bk4—56 to 60 inches; very pale brown (10YR 8/3) gravelly loam, light yellowish brown (10YR 6/4) moist; massive; slightly hard, very friable, slightly sticky and nonplastic; 15 percent gravel; violently effervescent; strongly alkaline (pH 9.0).

Range in Characteristics

Profile:

Thickness of mollic epipedon—8 to 18 inches

Depth to calcic horizon—8 to 18 inches

Particle-size control section (average):

Clay content—13 to 18 percent

Rock fragment content—15 to 35 percent

Ap and A horizons:

Value—4 or 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bk horizon:

Value—6 to 8 dry, 5 to 7 moist

Chroma—3 or 4 dry or moist

Texture—gravelly loam or gravelly silt loam

Calcium carbonate equivalent—10 to 30 percent

Yago Series

Depth class: Very deep (greater than 60 inches)

Drainage class: Well drained

Permeability: Slow

Landform: Fan remnants

Parent material: Kind—alluvium; source—mixed

Slope range: 4 to 40 percent

Elevation: 5,600 to 6,500 feet

Mean annual precipitation: 16 to 20 inches

Mean annual air temperature: 42 to 44 degrees F

Frost-free period: 70 to 80 days

Taxonomic class: Clayey-skeletal, montmorillonitic, frigid Typic Argixerolls

Typical Pedon

Yago very stony silty clay loam in an area of Yago-Manila complex, 20 to 40 percent slopes; about 11 miles west of Malad City, in Oneida County, Idaho; about 700 feet north and 1,600 feet east of the southwest corner of sec. 27, T. 14 S., R. 34 E.; 3 percent stones on soil surface.

A—0 to 10 inches; dark brown (10YR 3/3) very stony silty clay loam, very dark brown (10YR 2/2) moist; weak fine and medium subangular blocky structure parting to weak very fine granular; slightly hard, friable, slightly sticky and slightly plastic; many very fine and few fine to coarse roots; many very fine irregular pores and common very fine tubular pores; 15 percent gravel, 10 percent cobbles, and 10 percent stones; neutral (pH 7.3); abrupt wavy boundary.

Bt1—10 to 30 inches; strong brown (7.5YR 5/6) very cobbly clay loam, brown (7.5YR 4/4) moist; strong fine and medium subangular blocky structure; hard, friable, moderately sticky and moderately plastic; common very fine and medium and few fine and coarse roots; many very fine tubular pores; 70 percent prominent clay films on faces of peds and lining pores; 20 percent gravel and 35 percent cobbles; neutral (pH 7.1); clear wavy boundary.

Bt2—30 to 40 inches; reddish yellow (7.5YR 6/6) very cobbly clay loam, strong brown (7.5YR 5/6) moist; strong fine and medium angular blocky structure; hard, firm, very sticky and very plastic; few very fine and fine roots; common very fine and few fine tubular pores; 50 percent distinct clay films on faces of peds and lining pores; 15 percent gravel and 30 percent cobbles; neutral (pH 7.2); clear wavy boundary.

Bk—40 to 60 inches; reddish yellow (7.5YR 6/6) very cobbly silty clay loam, strong brown (7.5YR 5/6) moist; moderate fine and medium subangular blocky structure; hard, firm, moderately sticky and moderately plastic; few very fine roots; common very fine and few fine tubular pores; 10 percent gravel and 30 percent cobbles; strongly effervescent; slightly alkaline (pH 7.4).

Range in Characteristics

Profile:

Thickness of mollic epipedon—10 to 20 inches

Depth to secondary carbonates—36 to 40 inches

Particle-size control section (average):

Clay content—35 to 40 percent

Rock fragment content—40 to 60 percent

A horizon:

Value—3 to 5 dry, 2 or 3 moist

Chroma—2 or 3 dry or moist

Bt horizon:

Value—4 to 6 dry or moist

Chroma—4 to 6 dry or moist

Texture—very cobbly clay loam or very cobbly silty clay loam

Bk horizon:

Hue—7.5YR

Value—5 or 6 dry, 4 or 5 moist

Chroma—4 to 6 dry or moist

Texture—very cobbly silt loam or very cobbly silty clay loam

Calcium carbonate equivalent—15 to 25 percent

Other Features

The Yago soils in this survey area do not have iron and manganese concretions in the lower part of the profile. This difference, however, does not affect the use and management of these soils.

Formation of the Soils

Terril Kay Stevenson, geologist, Natural Resources Conservation Service, helped to prepare this section.

Soil is a natural three-dimensional feature of the earth's surface capable of supporting life. It has developed as a result of the physical and chemical interaction of five factors—composition of parent material, climate, action of living organisms, relief, and time (Buckman and Brady, 1969). The interaction of these factors determines the properties of a given soil and how it develops.

The soils in this survey area have been influenced by a variety of climates ranging from the cold, wet pre-glacial climate to the present cool, dry post-glacial climate. The properties of the soils are dominantly a result of the influence of this type of climate on the mountains, which are composed of sedimentary rock and lakelaid deposits.

Parent Material

The dominant parent material in the survey area consists of alluvium and lacustrine sediment influenced by loess. Also included is some eolian, residual, and colluvial material. The most recent deposits are the alluvial and eolian deposits of the Quaternary Silt of the Lake Bonneville Group (Rember and Bennett, 1979). Gravel of this group form intermediate fan slopes around most of the valleys and lower slopes of the mountain ranges (Alt and Hyndman, 1989; Rember and Bennett, 1979). The oldest deposits are those of the residual and alluvial soils above the shoreline of Lake Bonneville, which formed about 15,000 to 30,000 years ago. The highest water level in the lake was about 5,100 feet in elevation (Alt and Hyndman, 1989).

The late Tertiary Salt Lake Group consists of tuffaceous sediment that mainly occupies intermediate and lower slopes around the valleys above the shoreline of Lake Bonneville, particularly in Arbon Valley and along the southeastern slopes of the Sublett Range (Bond, 1978; Isaacson, 1983; Rember and Bennett, 1979). The eastern slope of the Malad Range is also composed dominantly of Salt Lake Group sediment. In the northeastern part of the survey area is an area of Tertiary igneous rock called the Starlight Formation, which consists of basalt, tuff, perlite, ashflow tuff, and diamictite (Rember and Bennett, 1979; Staley, 1962).

The bedrock in the mountain ranges almost exclusively consists of hard, fractured, upper Paleozoic sedimentary rock (Isaacson, 1989; Piper, 1924; Rember and Bennett, 1979; Ross and Forrester, 1958; Skipp and others, 1980; Staley, 1962). The exception is the Malad Range, which consists of lower Paleozoic sediment including Silurian, Ordovician, and Cambrian dolomite, quartzite, shale, metasedimentary rock, and limestone. The Sublett and Promontory Ranges as well as the Blue Springs Hills and Deep Creek Mountains are Mississippian, Pennsylvanian, and Permian limestone, siltstone, sandstone, and shale (Isaacson, 1989; Rember and Bennett, 1979; Skipp and others, 1980). The oldest rock in the survey area is on Oxford Peak, in the Bannock Range. It consists of Precambrian sediment including quartzite, argillite, and amphibolite (Alt and Hyndman, 1989; Rember and Bennett, 1979; Ross and Forrester, 1958).

Soils in the mountainous areas of the survey area are highly variable because of

the many types of rock. Other factors include variations in slope and the rate of weathering. Limestone, calcareous siltstone, and dolomite have contributed lime to most of the soils in the survey area. Another source of lime is calcareous loess deposited by southwesterly winds. The source of this loess is probably Lake Bonneville sediment from within the survey area and to the southwest of the area. Some of the dominant high-elevation soils are those of the Araveton, Ridgecrest, Thatcher, Watercanyon, and Wursten series. These soils dominantly formed in alluvium with some influence of calcareous loess.

Some of the mountainous soils formed in material that does not contain carbonates. These soils are well developed, they have a high content of clay, and/or a thick dark-colored surface layer. Examples are soils of the Broadhead, Clayburn, Manila, Northwater, Pavohroo, and Povey series.

The soils that formed in Tertiary igneous material in the northeastern part of the survey area are characterized by ashy material that contains a high percentage of volcanic debris from local pyroclastic flows (Alt and Hyndman, 1989; Rember and Bennett, 1979; Ross and Forrester, 1958). The soils have formed dominantly in alluvium and some residuum. They are poorly developed and have very little clay or organic matter. The Copenhagen, Lonigan, and Stines soils are dominant in this part of the survey area.

The intermediate terraces and drainageways in the survey area are comprised of alluvial and lacustrine soils that exhibit varying degrees of development. Elevation ranges from about 4,300 to 5,800 feet. Slopes are nearly level to steep. The soils are dominantly very deep, calcareous, and well drained, and they have a dark-colored surface layer. In soils such as those of the Rexburg, Ririe, Hans, Parleys, Kearns, Samaria, and Sterling series, the most notable feature is the presence of calcium carbonate. In most areas the calcium carbonate has been leached from the surface and has collected in the subsoil. These soils are in Arbon Valley. At the Lake Bonneville level (5,100 feet), the soils are gravelly in areas where the wave action has eroded rocky slopes at the edge of the shoreline. Examples are the Hondoho, Samaria, and Sterling soils in Arbon and Malad Valleys. To the west of Curlew Valley, Darkbull and Pyrat soils are examples.

Some of the soils at elevations of 4,300 to 5,800 feet formed in drainageways with meandering stream channels. Inkom, Jovine, and Goosenawt soils are examples. These soils are made up of thin layers that have been deposited by seasonal flooding during wetter years. In Pocatello Valley, the dominant soils of this type are those of the Bothwell, Elevator, and Povirt series. These soils are characterized by a high organic matter content in the topsoil, clay content of 30 percent or more, and calcium carbonate in some part of the drier soils. The Povirt soils are flooded annually, which leaches calcium carbonate out of the profile. The Bothwell and Elevator soils are drier; consequently, they have calcium carbonate from local parent material in the profile.

In Malad Valley, the parent material is somewhat similar to that in Pocatello Valley. Malad Valley consists of an old lakebed where water has influenced the properties of the soil. The lakebed has been dissected by the Malad River and nearby streams. A major difference between the soils in Pocatello Valley and those in Malad Valley is the content of salts. In Malad Valley, salts and lime are abundant in the soils. A constant supply of salts is provided by incoming water, and the parent material is also a source of salts. Soils in this area are those of the Bloor, Brinnum, Logan, and Langless series.

Soils of the Curlew Valley also developed in lakebed sediment. The Mellor soils in this area, near the Idaho-Utah border, are affected by the salts and sodium in the parent material. These soils have a thin subsoil near the surface, where salts and sodium have accumulated.

Climate

Climate has a strong influence on soil formation. Temperature and precipitation influence the rate of weathering and the deposition of soil layers. Vegetation, which provides organic matter for soil development, is also dependent on temperature and precipitation.

In this survey area, the climate is characterized by cool, wet winters and warm, dry summers. The driest and warmest areas are in the south and west, in Black Pine Valley. These areas receive about 8 inches of precipitation per year. By contrast, the wettest and coldest areas are in the high mountains at elevations of about 7,000 feet, where the annual rainfall is about 25 inches or more. The average annual temperature ranges from about 48 degrees F in the warmest areas to about 37 degrees in the coldest areas.

Soil development in the drier areas is slow, and the soils are characterized by a high content of salts and calcium carbonate. These soluble minerals are relatively stationary in this arid environment and are moved only by irrigation water. Other soil properties that developed under wetter conditions are now permanent features of the soils unless they are cropped. Examples are the thin argillic horizon near the surface of the Mellor soil and the calcic horizon in soils such as those of the Freedom and Bayhook series. These soils provide only a thin root zone for plants, thus very little organic matter is present for soil development.

Soils at elevations of about 5,100 to 6,000 feet have different properties because of the increase in precipitation and the reduction in temperature. These soils are characterized by a darker colored surface layer and a lighter colored subsoil with varying amounts of calcium carbonate. The darker color of the surface layer is a result of an increase in the amount of grass and other vegetation. The lighter color of the subsoil is a result of lime being leached to a greater depth in the profile. The dominant soils in this intermediate climatic zone are those of the Arbone, Kearns, Rexburg, and Ririe series. The average annual precipitation in this area ranges from 12 to 16 inches, and the average annual air temperature ranges from 42 to 52 degrees.

Soils above the Lake Bonneville shoreline receive 16 to 25 inches of precipitation. This additional moisture has resulted in lime being leached to a depth of 20 inches or more in most of the soils. A high content of organic matter in this area resulted in the formation of a dark-colored surface layer above the layer of lime. Depending on the landscape position and parent material, a few of these soils, such as those of the Manila and Broadhead series, have more than 35 percent clay in the subsoil. This too is related to the high precipitation. On soils such as those of the Ireland and Northwater series, the vegetation is very thick because of the cool, wet conditions and the north-facing slopes. Other soils in this vicinity that have a deep, dark-colored surface layer, a high content of clay in the subsoil, and lush vegetation are those of the Calpac, Hades, Jensen, and Thatcher series.

Soils above an elevation of 6,000 feet generally are poorly developed. Soils such as those of the Hymas and Hutchley series have been influenced by high rainfall, steep slopes, and cold temperatures. Under these conditions, the soil-forming factors are slowed. The microbial activity needed to form soil material is slowed by the cold soil temperatures. In addition, the soils in this environment are influenced by natural erosion such that the soil material is washed away nearly as fast as it can develop.

Living Organisms

Soil formation is greatly influenced by plant and animal activity. Organic matter, acidity, and bulk density are soil characteristics that are readily influenced by the kinds of plants and animals present.

The type of vegetation growing on a given soil is dependent on two main factors—the amount and quality of the water available to plants and the number of heat units available for plant growth.

In Curlew Valley, the natural conditions allow only for growth of vegetation that is tolerant of arid conditions. Only sparse stands of grass and other vegetation are present. Organic matter tends to oxidize faster under warm, dry conditions than under cooler, wetter conditions. Consequently, the soils in the warm, dry areas receive and accumulate very little organic matter and are light colored throughout. The dominant soils in the southern part of the valley are those of the Bayhook, Ecur, Mellor, and Freedom series. The vegetation is dominantly basin big sagebrush, needlegrass, greasewood, and Indian ricegrass. In the northern part of the valley, the precipitation is higher and the vegetation is more abundant. Consequently, the surface layer in these soils is darker colored. The dominant soils are those of the Rexburg, Ririe, Kearns, Arbone, and Parleys series. The dominant grasses are wheatgrass and bluegrass, and the dominant shrubs are antelope bitterbrush and basin big sagebrush or mountain big sagebrush. The plant communities in this area also have a percentage of forbs, primarily arrowleaf balsamleaf.

Pocatello Valley is a closed basin, which has influenced the vegetation and soil development. Spring snowmelt collects in the valley bottom, resulting in ponding in most years. The soils are dark-colored because of the abundant vegetation, which has contributed organic matter to the soils over the years. Pocatello Valley is now a fertile valley that can be successfully dryfarmed. The Povirt soils are in the lower areas in the valley, the Elevator and Bothwell soils are in the intermediate areas, and the Jensen soils are near the surrounding mountains.

Two types of poorly drained soils are south of Malad City. One consists of saline soils that are nearly barren in some areas or are sparsely vegetated with salt-tolerant plants. The other is closer to perennial streams and has a well-developed, deep, dark-colored root zone even though the calcium carbonate content is high. The soils in the saline areas are those of the Bloor, Brinnum, and Parehat series, and the dominant soils near streams are those of the Logan and Langless series.

Soils above the Lake Bonneville level (about 5,100 feet) formed under lush vegetation. Conditions are good for the growth of grasses, forbs, and shrubs. At the highest elevations (6,500 to 7,000 feet), the plant communities in swales and on north- and east-facing exposures include conifers. Several species of bluegrass and wheatgrass and many forbs and shrubs contribute a high amount of organic matter to these soils. Manila, Hades, Lonigan, and Rexburg soils are examples. These soils have the highest microbial activity of the soils in the survey area. Rodent and earthworm activity is also high, which increases tilth and fertility.

Relief

The relief in the survey area is primarily a result of mountain-building activities, and it affects microclimate, drainage, and runoff. The survey area is comprised of flood plains, lake terraces, dissected fan terraces, gently sloping to steep foothills, and steep mountainsides.

Soils on the lake plains have slopes of 0 to 4 percent. At elevations of about 4,300 feet, the soils that have slopes of 0 to 2 percent are poorly drained. Soils at slightly higher elevations are better drained and have steeper slopes. The water table is fed by three perennial streams that meandered widely before settling into their present channels.

The vertical distance between the lowest point of the lake plain and the upper Lake Bonneville shoreline is about 800 feet. The upper shoreline is marked by steeper areas where wave action has etched a line in the mountains. This line is visible as a continuous terrace following the contour of the shoreline. The soils that formed in the

swash zone, where wave action and slope alluvium have formed terraces in the mountains, are composed of calcareous silt and coarse fragments. These soils include those of the Sterling, Samaria, Darkbull, and Pyrat series. In northern Curlew Valley, the old shore deposits are sandy. Ecur soils are in this area.

When Lake Bonneville breached at Red Rocks Pass, the water level dropped in a relatively short period of time and stabilized at the Provo Terrace level. A second terrace is visible where wave action caused terracing and other swash zone activity. The vertical distance between the Bonneville Terrace and the Provo Terrace is about 300 feet.

Soils between the lake plain and the Lake Bonneville shoreline are on nearly level to gently sloping terraces. In the southern part of the survey area, the landscape is dominated by lake plains. Near the mountains, the landscape gradually changes to gently sloping valleys and hills. Perennial streams have cut channels in the soils and have carried sediment from the gently sloping hills during runoff in spring. The dominant soils include those of the Arbone, Parleys, Welby, Kearns, Rexburg, Ririe, Hans, and Wheelon series. Stream action on the lake plain, which occurred while Lake Bonneville was receding, has deposited sand on the terrace escarpments. Winds have altered these deposits, forming dunes in areas where the wind velocity was sufficient. The soils that formed in these deposits are those of the Preston and Kidman series.

The soils above the Lake Bonneville shoreline are primarily on mountains. The mountains in the survey area are oriented north and south and are in three separate ranges—the Malad Range in the eastern part, the Sublett Range in the western part, and the Samaria Range in the central part, which is an active earthquake zone. The aspect and landscape position of the soils on mountains vary. The soils on ridgetops normally are very rocky and shallow, and the soils on toeslopes and in swales are very deep and loamy. The dominant soils on mountains are those of the Hymas, Ridgecrest, Povey, Ireland, Hutchley, Araveton, and Hades series.

Time

The degree of soil development is dependent on the period of time a parent material is exposed to other soil-forming factors and on the relief of the landscape. The age of a soil is gauged by the development of the layers in the profile. For example, two profiles that have been subject to similar factors except for the period of time would exhibit differences in the amount of organic matter in the surface, the amount of clay in the subsoil, and the depth to soluble minerals such as lime. Areas of soils below the Lake Bonneville shoreline have been forming for about 15,000 years. Many of these soils have a well-developed subsoil and a high level of organic matter.

The youngest soils in the survey area, such as those of the Preston and Kidman series, formed in windblown sand. These soils have very little organic matter, and they exhibit little subsoil development or signs of leaching.

The alluvial soils in the survey area are somewhat older than the soils that formed in windblown deposits. The alluvial soils have developed a well-defined surface layer and subsoil. At elevations below 5,100 feet (Lake Bonneville shoreline), the soils have been developing since Lake Bonneville receded. Above that elevation, the alluvial soils range from those that formed in material on very old fan terraces on mountain toeslopes to those that formed in recent deposits on mountainsides. Most of the soils below the Lake Bonneville shoreline are characterized by a dark-colored surface layer and a weakly developed subsoil with lime immediately below the subsoil. Welby, Parleys, Freedom and Kearns soils are examples.

Some of the older soils in the survey area are on toeslopes of steep mountainsides. Some of these soils, such as those of the Manila and Broadhead

series, have been developing for more than 15,000 years and have heavy accumulations of clay in the subsoil. They commonly have a high content of organic matter in the upper part; however, this layer is somewhat eroded and may be very thin in the soils on ridges and side slopes.

Other older soils in the survey area are in concave areas on mountainsides. Soils such as those of the Northwater, Pavohroo, and Clayburn series are in areas where soil material accumulates. These soils are in swales on north- and east-facing slopes where material being moved downslope during runoff in spring is trapped.

Other older soils that have minimal development are the ashy soils in the northeastern and east-central parts of the survey area. Examples include those of the Copenhagen, Lonigan, and Stines series, which are made up of tuffaceous ash and fractured rhyolitic tuff. The high level of silica and the accelerated rate of erosion on these steeper slopes account for the lack of development in these soils.

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Glossary

ABC soil. A soil having an A, a B, and a C horizon.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alkali (sodic) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Alluvial fan. The fanlike deposit of a stream where it issues from a gorge upon a plain or of a tributary stream near or at its junction with its main stream.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Alpha,alpha-dipyridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Area reclaim (in tables). An area difficult to reclaim after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction in which a slope faces.

Association, soil. A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Base saturation. The degree to which material having cation-exchange properties is

saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bench terrace. A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Blowout. A shallow depression from which all or most of the soil material has been removed by the wind. A blowout has a flat or irregular floor formed by a resistant layer or by an accumulation of pebbles or cobbles. In some blowouts the water table is exposed.

Bottom land. The normal flood plain of a stream, subject to flooding.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

California bearing ratio (CBR). The load-supporting capacity of a soil as compared to that of standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

Canyon. A long, deep, narrow, very steep sided valley with high, precipitous walls in an area of high local relief.

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a chanter.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Claypan. A slowly permeable soil horizon that contains much more clay than the

horizons above it. A claypan is commonly hard when dry and plastic or stiff when wet.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

Colluvium. Soil material or rock fragments, or both, moved by creep, slide, or local wash and deposited at the base of steep slopes.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Compressible (in tables). Excessive decrease in volume of soft soil under load.

Concretions. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

Conglomerate. A coarse grained, clastic rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

- Corrosion.** Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.
- Cover crop.** A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.
- Cropping system.** Growing crops according to a planned system of rotation and management practices.
- Crop residue management.** Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.
- Cross-slope farming.** Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.
- Cutbanks cave** (in tables). The walls of excavations tend to cave in or slough.
- Decreasers.** The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.
- Deferred grazing.** Postponing grazing or resting grazing land for a prescribed period.
- Dense layer** (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.
- Depth, soil.** Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.
- Depth to rock** (in tables). Bedrock is too near the surface for the specified use.
- Diversion (or diversion terrace).** A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.
- Divided-slope farming.** A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.
- Drainage class** (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained*, *somewhat excessively drained*, *well drained*, *moderately well drained*, *somewhat poorly drained*, *poorly drained*, and *very poorly drained*. These classes are defined in the “Soil Survey Manual.”
- Drainage, surface.** Runoff, or surface flow of water, from an area.
- Draw.** A small stream valley that generally is more open and has broader bottom land than a ravine or gulch.
- Duff.** A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.
- Eluviation.** The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.
- Endosaturation.** A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.
- Eolian soil material.** Earthy parent material accumulated through wind action; commonly refers to sandy material in dunes or to loess in blankets on the surface.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Synonym: scarp.

Excess fines (in tables). Excess silt and clay in the soil. The soil does not provide a source of gravel or sand for construction purposes.

Excess lime (in tables). Excess carbonates in the soil that restrict the growth of some plants.

Excess salts (in tables). Excess water-soluble salts in the soil that restrict the growth of most plants.

Excess sodium (in tables). Excess exchangeable sodium in the soil. The resulting poor physical properties restrict the growth of plants.

Extrusive rock. Igneous rock derived from deep-seated molten matter (magma) emplaced on the earth's surface.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fan terrace. A relict alluvial fan, no longer a site of active deposition, incised by younger and lower alluvial surfaces.

Fast intake (in tables). The rapid movement of water into the soil.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the oven-dry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity*, *normal moisture capacity*, or *capillary capacity*.

Fine textured soil. Sandy clay, silty clay, or clay.

First bottom. The normal flood plain of a stream, subject to frequent or occasional flooding.

Flood plain. A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

Foothill. A steeply sloping upland that has relief of as much as 1,000 feet (300 meters) and fringes a mountain range or high-plateau escarpment.

Footslope. The position that forms the inner, gently inclined surface at the base of a hillslope. In profile, footslopes are commonly concave. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Fragile (in tables). A soil that is easily damaged by use or disturbance.

Frost action (in tables). Freezing and thawing of soil moisture. Frost action can damage roads, buildings and other structures, and plant roots.

- Genesis, soil.** The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.
- Gleyed soil.** Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.
- Grassed waterway.** A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.
- Gravel.** Rounded or angular fragments of rock as much as 3 inches (7.6 centimeters) in diameter. An individual piece is a pebble.
- Gravelly soil material.** Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.
- Green manure crop** (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.
- Ground water.** Water filling all the unblocked pores of the material below the water table.
- Gully.** A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.
- Hard bedrock.** Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.
- Hardpan.** A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.
- Hill.** A natural elevation of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.
- Horizon, soil.** A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:
- O horizon.*—An organic layer of fresh and decaying plant residue.
- A horizon.*—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.
- E horizon.*—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.
- B horizon.*—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying
- C horizon.* The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.
- C horizon.*—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or

unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential.

The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock. Rock formed by solidification from a molten or partially molten state.

Major varieties include plutonic and volcanic rock. Examples are andesite, basalt, and granite.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application.

Interfluv. An elevated area between two drainageways that sheds water to those drainageways.

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions. Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Lake plain. A nearly level surface marking the floor of an extinct lake filled by well-sorted, generally fine-textured, stratified deposits, commonly containing varves.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess. Fine grained material, dominantly of silt-sized particles, deposited by wind.

Low strength. The soil is not strong enough to support loads.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement. Nearly all such rocks are crystalline.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. An area that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size.

Descriptive terms are as follows: abundance—*few*, *common*, and *many*; size—*fine*, *medium*, and *coarse*; and contrast—*faint*, *distinct*, and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium*, from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse*, more than 15 millimeters (about 0.6 inch).

Mountain. A natural elevation of the land surface, rising more than 1,000 feet above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range.

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Natric horizon. A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan*, *fragipan*, *claypan*, *plowpan*, and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedon. The smallest volume that can be called “a soil.” A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Perco slowly (in tables). The slow movement of water through the soil adversely affects the specified use.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as “saturated hydraulic conductivity,” which is defined in the “Soil Survey Manual.” In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as “permeability.” Terms describing permeability, measured in inches per hour, are as follows:

Extremely slow	0.0 to 0.01 inch
Very slow	0.01 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Playa. The generally dry and nearly level lake plain that occupies the lowest parts of closed depressional areas, such as those on intermontane basin floors.

Temporary flooding occurs primarily in response to precipitation and runoff.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poor filter (in tables). Because of rapid or very rapid permeability, the soil may not adequately filter effluent from a waste disposal system.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Range condition. The present composition of the plant community on a range site in relation to the potential natural plant community for that site. Range condition is expressed as excellent, good, fair, or poor on the basis of how much the present plant community has departed from the potential.

Rangeland. Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

Range site. An area of rangeland where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. A range site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other range sites in kind or proportion of species or total production.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in pH values. A

soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Regolith. The unconsolidated mantle of weathered rock and soil material on the earth's surface; the loose earth material above the solid rock.

Relief. The elevations or inequalities of a land surface, considered collectively.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

Rill. A steep-sided channel resulting from accelerated erosion. A rill generally is a few inches deep and not wide enough to be an obstacle to farm machinery.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Rooting depth (in tables). Shallow root zone. The soil is shallow over a layer that greatly restricts roots.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Saline soil. A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.

Salty water (in tables). Water that is too salty for consumption by livestock.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Second bottom. The first terrace above the normal flood plain (or first bottom) of a river.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Seepage (in tables). The movement of water through the soil. Seepage adversely affects the specified use.

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock formed by the hardening of a clay deposit.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shoulder. The position that forms the uppermost inclined surface near the top of a hillslope. It is a transition from backslope to summit. The surface is dominantly convex in profile and erosional in origin.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Side slope. A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone. Sedimentary rock made up of dominantly silt-sized particles.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Slickensides. Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.

Slick spot. A small area of soil having a puddled, crusted, or smooth surface and an excess of exchangeable sodium. The soil generally is silty or clayey, is slippery when wet, and is low in productivity.

Slippage (in tables). Soil mass susceptible to movement downslope when loaded, excavated, or wet.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus,

a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

Nearly level	0 to 2 percent
Gently sloping	2 to 4 percent
Moderately sloping	4 to 8 percent
Strongly sloping	8 to 20 percent
Moderately steep	20 to 30 percent
Steep	30 to 60 percent
Very steep	60 percent and higher

Slope (in tables). Slope is great enough that special practices are required to ensure satisfactory performance of the soil for a specific use.

Slow intake (in tables). The slow movement of water into the soil.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Small stones (in tables). Rock fragments less than 3 inches (7.6 centimeters) in diameter. Small stones adversely affect the specified use of the soil.

Sodic (alkali) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Sodicity. The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of Na^+ to $\text{Ca}^{++} + \text{Mg}^{++}$. The degrees of sodicity and their respective ratios are:

Slight	less than 13:1
Moderate	13-30:1
Strong	more than 30:1

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summer fallow. The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop.
A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand*, *loamy sand*, *sandy loam*, *loam*, *silt loam*, *silt*, *sandy clay loam*, *clay loam*, *silty clay loam*, *sandy clay*, *silty clay*, and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

Thin layer (in tables). Otherwise suitable soil material that is too thin for the specified use.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope. The position that forms the gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are

constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Too arid (in tables). The soil is dry most of the time, and vegetation is difficult to establish.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Toxicity (in tables). Excessive amount of toxic substances, such as sodium or sulfur, that severely hinder establishment of vegetation or severely restrict plant growth.

Tuff. A compacted deposit that is 50 percent or more volcanic ash and dust.

Unstable fill (in tables). Risk of caving or sloughing on banks of fill material.

Upland. Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Weathering. All physical and chemical changes produced in rocks or other deposits at or near the earth's surface by atmospheric agents. These changes result in disintegration and decomposition of the material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Tables

Table 1.--Temperature and Precipitation
(Recorded in the period 1948-91 at Malad City, Idaho)

Month	Temperature						Precipitation				
	Average daily maximum	Average daily minimum	Average	2 years in 10 will have--		Average number of growing degree days*	Average	2 years in 10 will have--		Average number of days with 0.10 inch or more	Average snowfall
				Maximum	Minimum			Less	More		
				temperature higher than--	temperature lower than--			than--	than--		
	°F	°F	°F	°F	°F	Units	In	In	In		In
January	31.6	9.4	20.5	47	-22	0	1.15	0.63	1.60	4	11.1
February	38.2	14.4	26.3	57	-18	4	1.02	0.40	1.55	3	7.9
March	48.0	22.8	35.4	69	-1	37	1.07	0.49	1.57	3	4.7
April	59.6	30.0	44.8	80	15	171	1.16	0.49	1.74	3	1.7
May	69.5	37.4	53.4	87	22	415	1.75	0.70	2.63	4	0.2
June	79.8	43.7	61.7	96	29	652	1.26	0.44	1.94	3	0.0
July	89.6	49.6	69.6	100	36	917	1.00	0.23	1.65	2	0.0
August	87.9	48.0	68.0	99	34	866	0.85	0.20	1.37	2	0.0
September	78.0	39.1	58.6	93	23	557	0.98	0.25	1.64	2	0.0
October	64.9	29.7	47.3	83	15	246	1.00	0.38	1.65	2	0.5
November	46.7	22.2	34.4	67	-4	29	1.13	0.39	1.74	3	4.6
December	34.3	13.1	23.7	52	-16	1	1.15	0.48	1.77	4	10.2
Yearly:											
Average	60.7	29.9	45.3	---	---	---	---	---	---	---	---
Extreme	102	-35	---	100	-25	---	---	---	---	---	---
Total	---	---	---	---	---	3,895	13.53	9.34	16.42	35	40.9

Average number of days per year with at least 1 inch of snow on the ground: 76

*A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (Threshold: 40 degrees F).

Table 2.--Freeze Dates in Spring and Fall
(Recorded in the period 1948-91 at Malad City, Idaho)

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	May 19	June 7	June 27
2 years in 10 later than--	May 13	May 30	June 19
5 years in 10 later than--	May 1	May 15	June 5
First freezing temperature in fall:			
1 year in 10 earlier than--	September 23	September 11	August 31
2 years in 10 earlier than--	September 27	September 16	September 5
5 years in 10 earlier than--	October 6	September 24	September 14

Table 3.--Growing Season
(Recorded in the period 1948-91 at Malad City,
Idaho)

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	<i>Days</i>	<i>Days</i>	<i>Days</i>
9 years in 10	132	106	72
8 years in 10	141	114	82
5 years in 10	157	131	101
2 years in 10	173	147	120
1 year in 10	181	156	129

Table 4.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
1	Araveton-Hades complex, 4 to 12 percent slopes-----	4,510	0.7
2	Arbone silt loam, 0 to 4 percent slopes-----	1,650	0.2
3	Arbone silt loam, 4 to 12 percent slopes-----	9,040	1.3
4	Arbone silt loam, 12 to 20 percent slopes-----	20,305	3.0
5	Arbone-Hondoho-Cedarhill complex, 4 to 12 percent slopes-----	15,685	2.3
6	Arbone-Hondoho-Cedarhill complex, 12 to 30 percent slopes-----	17,725	2.6
7	Bayhook silt loam, 0 to 2 percent slopes-----	15,095	2.2
8	Bayhook-Ecur complex, 0 to 4 percent slopes-----	5,345	0.8
9	Bingham gravelly loam, 1 to 4 percent slopes-----	360	*
10	Bingham-Tiroad complex, 0 to 2 percent slopes-----	1,045	0.2
11	Bloor-Brinnum complex, 0 to 2 percent slopes-----	1,750	0.3
12	Bothwell silt loam, 0 to 2 percent slopes-----	4,760	0.7
13	Bothwell-Hades-Justesen complex, 6 to 25 percent slopes-----	1,670	0.2
14	Brinnum-Logan-Langless complex, 0 to 2 percent slopes-----	1,865	0.3
15	Buckboard loam, 0 to 2 percent slopes-----	2,855	0.4
16	Buist gravelly silt loam, 20 to 30 percent slopes-----	445	*
17	Calpac-Ridgecrest-Ireland association, 40 to 70 percent slopes-----	8,285	1.2
18	Cedarhill gravelly silt loam, 4 to 12 percent slopes-----	1,510	0.2
19	Cedarhill gravelly silt loam, 12 to 30 percent slopes-----	1,140	0.2
20	Cedarhill-Hymas association, 20 to 55 percent slopes-----	1,565	0.2
21	Cedarhill-Lostine complex, 12 to 30 percent slopes-----	1,220	0.2
22	Collinston silt loam, 0 to 2 percent slopes-----	825	0.1
23	Collinston-Kearns complex, 2 to 12 percent slopes-----	1,645	0.2
24	Copenhagen-Lonigan-Manila association, 12 to 50 percent slopes-----	11,630	1.7
25	Darkbull-Pyrat-Ecur complex, 2 to 30 percent slopes-----	1,640	0.2
26	DeJarnet gravelly silt loam, 0 to 4 percent slopes-----	4,135	0.6
27	Dumps, mine-----	25	*
28	Ecur fine sandy loam, 0 to 4 percent slopes-----	3,300	0.5
29	Ecur-Darkbull complex, 1 to 8 percent slopes-----	8,090	1.2
30	Elevator silt loam, 0 to 4 percent slopes-----	7,500	1.1
31	Elevator-Jensen complex, 0 to 4 percent slopes-----	5,465	0.8
32	Elevator-Jensen complex, 4 to 12 percent slopes-----	7,705	1.1
33	Fridlo silt loam, 0 to 2 percent slopes-----	2,645	0.4
34	Goosenawt gravelly loam, 0 to 2 percent slopes-----	3,070	0.5
35	Hans silt loam, 0 to 2 percent slopes-----	6,720	1.0
36	Highcreek-Sterling complex, 4 to 12 percent slopes-----	3,340	0.5
37	Highcreek-Sterling complex, 12 to 25 percent slopes-----	575	*
38	Hillfield-Kucera complex, 4 to 30 percent slopes-----	2,195	0.3
39	Hillfield-Kucera complex, 30 to 50 percent slopes-----	935	0.1
40	Hondoho-Calpac-Lizdale association, 30 to 70 percent slopes-----	8,450	1.2
41	Hondoho-Hymas-Pavohroo association, 12 to 30 percent slopes-----	2,350	0.3
42	Hondoho-Hymas-Pavohroo association, 30 to 60 percent slopes-----	25,050	3.7
43	Hondoho-Ridgecrest-Hades association, 12 to 50 percent slopes-----	23,810	3.5
44	Hutchley-McCarey-Araveton complex, 4 to 40 percent slopes-----	14,095	2.1
45	Hymas-Calpac-Ireland association, 30 to 70 percent slopes-----	11,230	1.7
46	Hymas-Northwater-Clayburn association, 20 to 60 percent slopes-----	4,920	0.7
47	Hymas-Povey association, 30 to 60 percent slopes-----	5,125	0.8
48	Hymas-Povey-Pavohroo association, 30 to 70 percent slopes-----	9,735	1.4
49	Inkom silt loam, 0 to 1 percent slopes-----	755	0.1
50	Iphil-Ririe-Watercanyon complex, 8 to 20 percent slopes-----	490	*
51	Ireland-Calpac association, 30 to 60 percent slopes-----	22,625	3.3
52	Jensen silt loam, 0 to 2 percent slopes-----	1,320	0.2
53	Jensen silt loam, 2 to 6 percent slopes-----	415	*
54	Jensen-Iphil-Wursten complex, 4 to 12 percent slopes-----	1,100	0.2
55	Jovine silt loam, 0 to 2 percent slopes-----	2,920	0.4
56	Justesen silt loam, 4 to 12 percent slopes-----	605	*
57	Justesen silt loam, 12 to 25 percent slopes-----	2,495	0.4
58	Justesen-Ririe-Buist complex, 12 to 20 percent slopes-----	650	*
59	Kearns silt loam, 0 to 2 percent slopes-----	5,770	0.8
60	Kearns silt loam, 2 to 4 percent slopes-----	6,375	0.9
61	Kidman fine sandy loam, 1 to 4 percent slopes-----	5,550	0.8

See footnote at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
62	Kidman-Preston association, 2 to 12 percent slopes-----	1,635	0.2
63	Kucera silt loam, 4 to 12 percent slopes-----	130	*
64	Lagonot silt loam, 0 to 3 percent slopes-----	2,915	0.4
65	Langless silt loam, 0 to 2 percent slopes-----	2,135	0.3
66	Langless-Logan complex, 0 to 2 percent slopes-----	880	0.1
67	Lanoak silt loam, 0 to 4 percent slopes-----	1,130	0.2
68	Lanoak silt loam, 12 to 30 percent slopes-----	390	*
69	Lanoak-Hondoho complex, 6 to 20 percent slopes-----	405	*
70	Logan silt loam, 0 to 2 percent slopes-----	4,215	0.6
71	Lonigan-Lizdale association, 6 to 40 percent slopes-----	2,205	0.3
72	Lostine silt loam, 20 to 30 percent slopes-----	175	*
73	Manila silt loam, 4 to 12 percent slopes-----	370	*
74	Manila-Broadhead complex, 4 to 12 percent slopes-----	7,555	1.1
75	Manila-Broadhead complex, 12 to 30 percent slopes-----	7,985	1.2
76	Manila-Lonigan complex, 6 to 40 percent slopes-----	3,025	0.4
77	Manila-Obnot complex, 4 to 12 percent slopes-----	1,855	0.3
78	Manila-Yago complex, 4 to 12 percent slopes-----	3,390	0.5
79	Manila-Yago complex, 12 to 30 percent slopes-----	1,770	0.3
80	Mellor-Freedom complex, 0 to 2 percent slopes-----	16,705	2.5
81	Neeley silt loam, 0 to 4 percent slopes-----	2,310	0.3
82	Northwater-Povey-Pavohroo association, 30 to 60 percent slopes-----	5,290	0.8
83	Parehat silt loam, 0 to 2 percent slopes-----	325	*
84	Parleys silt loam, 0 to 2 percent slopes-----	6,870	1.0
85	Parleys silt loam, 2 to 4 percent slopes-----	7,160	1.1
86	Parleys-Welby complex, 2 to 12 percent slopes-----	4,635	0.7
87	Parleys-Wheelon complex, 4 to 12 percent slopes-----	4,930	0.7
88	Pavohroo-Povey association, 30 to 60 percent slopes-----	6,485	1.0
89	Pavohroo-Stines-Lonigan association, 10 to 40 percent slopes-----	1,665	0.2
90	Pits, gravel-----	122	*
91	Povey-Hades-Hondoho association, 10 to 50 percent slopes-----	3,320	0.5
92	Povey-Ireland-Calpac association, 30 to 70 percent slopes-----	7,765	1.1
93	Povey-Pavohroo association, 30 to 60 percent slopes-----	15,045	2.2
94	Povirt silty clay loam, 0 to 2 percent slopes-----	1,630	0.2
95	Raldrige gravelly loam, 4 to 12 percent slopes-----	1,215	0.2
96	Rexburg silt loam, 1 to 4 percent slopes-----	1,065	0.2
97	Rexburg-Arbone-Ririe complex, 4 to 12 percent slopes-----	5,010	0.7
98	Rexburg-Arbone-Ririe complex, 12 to 25 percent slopes-----	1,050	0.2
99	Rexburg-Iphil-Watercanyon complex, 12 to 30 percent slopes-----	1,475	0.2
100	Rexburg-Lanoak complex, 4 to 12 percent slopes-----	1,775	0.3
101	Rexburg-Lanoak complex, 12 to 25 percent slopes-----	3,340	0.5
102	Rexburg-Lanoak-Watercanyon complex, 4 to 12 percent slopes-----	1,600	0.2
103	Rexburg-Ririe-Kucera complex, 2 to 8 percent slopes-----	5,715	0.8
104	Rexburg-Thatcher-Ririe complex, 12 to 30 percent slopes-----	1,010	0.1
105	Rexburg-Watercanyon-Lanoak complex, 12 to 20 percent slopes-----	2,155	0.3
106	Ridgecrest-Hondoho complex, 30 to 60 percent slopes-----	30,550	4.5
107	Ridgecrest-Hondoho-Hymas association, 30 to 60 percent slopes-----	9,345	1.4
108	Ridgecrest-Hondoho-Lizdale association, 30 to 60 percent slopes-----	12,215	1.8
109	Ridgecrest-Hymas association, 30 to 60 percent slopes-----	39,060	5.8
110	Ririe-Buist complex, 4 to 12 percent slopes-----	1,650	0.2
111	Ririe-Cedarhill complex, 4 to 12 percent slopes-----	1,260	0.2
112	Ririe-Cedarhill complex, 12 to 20 percent slopes-----	1,080	0.2
113	Ririe-Hondoho complex, 12 to 20 percent slopes-----	640	*
114	Ririe-Iphil-Kucera complex, 2 to 8 percent slopes-----	3,710	0.5
115	Ririe-Iphil-Rexburg complex, 4 to 12 percent slopes-----	6,235	0.9
116	Ririe-Rexburg complex, 4 to 12 percent slopes-----	16,340	2.4
117	Ririe-Watercanyon complex, 4 to 12 percent slopes-----	1,085	0.2
118	Ririe-Watercanyon complex, 12 to 30 percent slopes-----	1,570	0.2
119	Samaria silt loam, 0 to 4 percent slopes-----	2,245	0.3
120	Samaria silt loam, 4 to 8 percent slopes-----	1,790	0.3
121	Samaria-Pollynot complex, 4 to 12 percent slopes-----	9,030	1.3
122	Samaria-Sterling complex, 4 to 12 percent slopes-----	8,570	1.3

See footnote at end of table.

Table 4.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
123	Sterling very gravelly loam, 12 to 20 percent slopes-----	2,845	0.4
124	Thatcher silt loam, 4 to 12 percent slopes-----	3,550	0.5
125	Thatcher-Jensen complex, 12 to 30 percent slopes-----	1,945	0.3
126	Freedom silt loam, 0 to 4 percent slopes-----	4,625	0.7
127	Tickason very fine sandy loam, 0 to 2 percent slopes-----	3,660	0.5
128	Tickason very fine sandy loam, 2 to 4 percent slopes-----	1,905	0.3
129	Tirod silt loam, 0 to 2 percent slopes-----	5,670	0.8
130	Toefoot silt loam, 0 to 4 percent slopes-----	1,935	0.3
131	Welby-Parleys complex, 0 to 2 percent slopes-----	1,695	0.2
132	Wursten gravelly silt loam, 4 to 15 percent slopes-----	360	*
133	Yago-Manila complex, 20 to 40 percent slopes-----	6,335	0.9
134	Water-----	1,168	0.2
	Total-----	679,000	100.0

* Less than 0.1 percent.

Table 5.--Land Capability and Yields per Acre of Crops and Pasture

(Yields in the "N" columns are for nonirrigated areas; those in the "I" columns are for irrigated areas. Yields are those that can be expected under a high level of management. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land capability		Alfalfa hay		Barley		Pasture		Wheat	
	N	I	N	I	N	I	N	I	N	I
			Tons	Tons	Bu	Bu	AUM	AUM	Bu	Bu
1:										
Araveton-----	3e	---	---	---	30.00	---	---	---	30.00	---
Hades-----	3e	---	---	---	37.00	---	---	---	35.00	---
2:										
Arbone-----	3c	---	1.00	---	30.00	---	2.50	---	25.00	---
3:										
Arbone-----	3e	---	1.00	---	25.00	---	2.50	---	20.00	---
4:										
Arbone-----	4e	---	---	---	23.00	---	---	---	18.00	---
5:										
Arbone-----	3e	---	1.00	---	25.00	---	---	---	20.00	---
Hondoho-----	3e	---	1.00	---	35.00	---	---	---	30.00	---
Cedarhill-----	4e	---	1.50	---	30.00	---	---	---	25.00	---
6:										
Arbone-----	4e	---	---	---	23.00	---	---	---	18.00	---
Hondoho-----	4e	---	---	---	30.00	---	---	---	25.00	---
Cedarhill-----	4e	---	---	---	30.00	---	---	---	25.00	---
7:										
Bayhook-----	6s	3s	---	---	---	70.00	---	---	---	55.00
8:										
Bayhook-----	6s	---	---	---	---	---	---	---	---	---
Ecur-----	6c	---	---	---	---	---	---	---	---	---
9:										
Bingham-----	6s	3s	---	3.00	---	65.00	---	---	---	60.00
10:										
Bingham-----	6s	3s	---	3.00	---	65.00	---	---	---	60.00
Tirod-----	3c	2c	---	3.50	---	70.00	---	---	---	65.00
11:										
Bloor-----	7s	---	---	---	---	---	---	---	---	---
Brinnum-----	5w	---	---	---	---	---	---	---	---	---
12:										
Bothwell-----	3c	---	1.50	---	40.00	---	---	---	35.00	---
13:										
Bothwell-----	4e	6e	1.00	4.00	50.00	95.00	---	---	40.00	80.00
Hades-----	4e	6e	1.50	4.00	30.00	80.00	---	---	30.00	80.00

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

[illegible]

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

[illegible]

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Alfalfa hay		Barley		Pasture		Wheat	
	N	I	N	I	N	I	N	I	N	I
			Tons	Tons	Bu	Bu	AUM	AUM	Bu	Bu
41:										
Hondoho-----	4e	---	---	---	30.00	---	---	---	25.00	---
Hymas-----	6s	---	---	---	---	---	---	---	---	---
Pavohroo-----	4e	---	---	---	30.00	---	---	---	25.00	---
42:										
Hondoho-----	7e	---	---	---	---	---	---	---	---	---
Hymas-----	7s	---	---	---	---	---	---	---	---	---
Pavohroo-----	7e	---	---	---	---	---	---	---	---	---
43:										
Hondoho-----	6e	---	---	---	---	---	---	---	---	---
Ridgecrest-----	6e	---	---	---	---	---	---	---	---	---
Hades-----	6e	---	---	---	---	---	---	---	---	---
44:										
Hutchley-----	6e	---	---	---	---	---	---	---	---	---
McCarey-----	4e	---	---	---	---	---	---	---	---	---
Araveton-----	4e	---	---	---	---	---	---	---	---	---
45:										
Hymas-----	7s	---	---	---	---	---	---	---	---	---
Calpac-----	7e	---	---	---	---	---	---	---	---	---
Ireland-----	7e	---	---	---	---	---	---	---	---	---
46:										
Hymas-----	7s	---	---	---	---	---	---	---	---	---
Northwater-----	7e	---	---	---	---	---	---	---	---	---
Clayburn-----	7e	---	---	---	---	---	---	---	---	---
47:										
Hymas-----	7s	---	---	---	---	---	---	---	---	---
Povey-----	7e	---	---	---	---	---	---	---	---	---
48:										
Hymas-----	7s	---	---	---	---	---	---	---	---	---
Povey-----	7e	---	---	---	---	---	---	---	---	---
Pavohroo-----	7e	---	---	---	---	---	---	---	---	---
49:										
Inkom-----	4w	4w	---	---	---	55.00	7.00	10.00	---	45.00
50:										
Iphil-----	4e	---	---	---	30.00	---	---	---	25.00	---
Ririe-----	3e	---	---	---	35.00	---	---	---	30.00	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Alfalfa hay		Barley		Pasture		Wheat	
	N	I	N	I	N	I	N	I	N	I
			Tons	Tons	Bu	Bu	AUM	AUM	Bu	Bu
50: Watercanyon-----	3e	---	---	---	20.00	---	---	---	20.00	---
51: Ireland-----	7e	---	---	---	---	---	---	---	---	---
Calpac-----	7e	---	---	---	---	---	---	---	---	---
52: Jensen-----	3c	---	---	---	25.00	---	---	---	25.00	---
53: Jensen-----	3e	---	---	---	25.00	---	---	---	25.00	---
54: Jensen-----	3e	4e	---	---	35.00	70.00	---	---	40.00	70.00
Iphil-----	3e	4e	---	---	40.00	75.00	---	---	35.00	75.00
Wursten-----	3e	4e	---	---	30.00	60.00	---	---	25.00	65.00
55: Jovine-----	3c	3c	2.00	4.00	35.00	70.00	---	---	30.00	70.00
56: Justesen-----	3e	---	---	---	35.00	---	---	---	30.00	---
57: Justesen-----	4e	---	---	---	35.00	---	---	---	30.00	---
58: Justesen-----	4e	---	---	---	35.00	---	---	---	30.00	---
Ririe-----	4e	---	---	---	30.00	---	---	---	25.00	---
Buist-----	4e	---	---	---	30.00	---	---	---	25.00	---
59: Kearns-----	3c	2c	1.25	4.00	40.00	70.00	---	---	35.00	55.00
60: Kearns-----	3c	2c	1.25	4.00	40.00	70.00	---	---	35.00	55.00
61: Kidman-----	3e	2e	---	6.00	---	100.00	---	---	---	---
62: Kidman-----	3e	3e	---	5.00	---	90.00	---	---	---	---
Preston-----	6s	4s	---	3.50	---	85.00	---	---	---	---
63: Kucera-----	3e	4e	2.50	4.00	35.00	80.00	6.00	10.00	30.00	70.00
64: Lagonot-----	3w	3w	1.50	3.00	25.00	70.00	3.00	5.00	20.00	65.00
65: Langless-----	5w	5w	---	---	---	---	---	5.00	---	---
66: Langless-----	5w	5w	---	---	---	---	---	5.00	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Alfalfa hay		Barley		Pasture		Wheat	
	N	I	N	I	N	I	N	I	N	I
			Tons	Tons	Bu	Bu	AUM	AUM	Bu	Bu
66: Logan-----	5w	5w	---	---	---	---	---	3.00	---	---
67: Lanoak-----	3c	---	2.00	---	45.00	---	---	---	38.00	---
68: Lanoak-----	4e	---	1.50	---	42.00	---	---	---	35.00	---
69: Lanoak-----	3e	---	2.00	---	45.00	---	---	---	38.00	---
Hondoho-----	3e	---	1.00	---	35.00	---	---	---	30.00	---
70: Logan-----	5w	5w	---	---	---	---	---	3.00	---	---
71: Lonigan-----	6e	---	---	---	---	---	---	---	---	---
Lizdale-----	3e	---	---	---	---	---	---	---	---	---
72: Lostine-----	6e	---	---	---	---	---	---	---	---	---
73: Manila-----	3e	---	2.00	---	40.00	---	---	---	35.00	---
74: Manila-----	3e	---	---	---	40.00	---	---	---	35.00	---
Broadhead-----	3e	---	---	---	40.00	---	---	---	35.00	---
75: Manila-----	4e	---	---	---	35.00	---	---	---	30.00	---
Broadhead-----	4e	---	---	---	35.00	---	---	---	30.00	---
76: Manila-----	4e	---	---	---	35.00	---	---	---	---	---
Lonigan-----	4e	---	---	---	30.00	---	---	---	---	---
77: Manila-----	3e	---	---	---	40.00	---	---	---	35.00	---
Obnot-----	6s	---	---	---	20.00	---	---	---	20.00	---
78: Manila-----	3e	---	---	---	40.00	---	---	---	35.00	---
Yago-----	6e	---	---	---	30.00	---	---	---	30.00	---
79: Manila-----	4e	---	---	---	35.00	---	---	---	30.00	---
Yago-----	6e	---	---	---	30.00	---	---	---	30.00	---
80: Mellor-----	6s	4s	---	2.00	---	50.00	---	---	---	---
Freedom-----	6s	3s	---	3.50	---	50.00	---	---	---	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

[illegible]

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Alfalfa hay		Barley		Pasture		Wheat	
	N	I	N	I	N	I	N	I	N	I
			Tons	Tons	Bu	Bu	AUM	AUM	Bu	Bu
94: Povirt-----	3w	---	---	---	35.00	---	---	---	38.00	---
95: Raldridge-----	3e	---	---	---	25.00	---	---	---	25.00	---
96: Rexburg-----	3c	3e	2.00	5.00	40.00	90.00	---	---	35.00	80.00
97: Rexburg-----	3e	---	2.00	---	40.00	---	---	---	35.00	---
Arbone-----	3e	---	1.00	---	25.00	---	---	---	20.00	---
Ririe-----	3e	---	2.00	---	35.00	---	---	---	30.00	---
98: Rexburg-----	4e	---	---	---	40.00	---	---	---	35.00	---
Arbone-----	4e	---	---	---	23.00	---	---	---	18.00	---
Ririe-----	4e	---	---	---	30.00	---	---	---	25.00	---
99: Rexburg-----	6e	---	---	---	30.00	---	---	---	25.00	---
Iphil-----	6e	---	---	---	20.00	---	---	---	20.00	---
Watercanyon-----	6e	---	---	---	12.00	---	---	---	12.00	---
100: Rexburg-----	3e	---	2.00	---	40.00	---	---	---	35.00	---
Lanoak-----	3e	---	2.00	---	45.00	---	---	---	38.00	---
101: Rexburg-----	4e	---	2.00	---	40.00	---	---	---	35.00	---
Lanoak-----	4e	---	1.50	---	42.00	---	---	---	35.00	---
102: Rexburg-----	3e	---	---	---	40.00	---	---	---	35.00	---
Lanoak-----	3e	---	---	---	45.00	---	---	---	38.00	---
Watercanyon-----	3e	---	---	---	20.00	---	---	---	20.00	---
103: Rexburg-----	3e	3e	2.00	5.00	40.00	90.00	---	---	35.00	80.00
Ririe-----	3e	4e	2.00	4.00	35.00	80.00	---	---	30.00	70.00
Kucera-----	3e	4e	2.50	4.00	35.00	80.00	---	---	30.00	70.00
104: Rexburg-----	6e	---	---	---	30.00	---	---	---	25.00	---
Thatcher-----	6e	---	---	---	30.00	---	---	---	25.00	---
Ririe-----	6e	---	---	---	25.00	---	---	---	20.00	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Alfalfa hay		Barley		Pasture		Wheat	
	N	I	N	I	N	I	N	I	N	I
			Tons	Tons	Bu	Bu	AUM	AUM	Bu	Bu
105:										
Rexburg-----	4e	---	---	---	40.00	---	---	---	35.00	---
Watercanyon-----	4e	---	---	---	15.00	---	---	---	15.00	---
Lanoak-----	4e	---	---	---	42.00	---	---	---	35.00	---
106:										
Ridgecrest-----	7e	---	---	---	---	---	---	---	---	---
Hondoho-----	7e	---	---	---	---	---	---	---	---	---
107:										
Ridgecrest-----	7e	---	---	---	---	---	---	---	---	---
Hondoho-----	7e	---	---	---	---	---	---	---	---	---
Hymas-----	7s	---	---	---	---	---	---	---	---	---
108:										
Ridgecrest-----	7e	---	---	---	---	---	---	---	---	---
Hondoho-----	7e	---	---	---	---	---	---	---	---	---
Lizdale-----	7e	---	---	---	---	---	---	---	---	---
109:										
Ridgecrest-----	7e	---	---	---	---	---	---	---	---	---
Hymas-----	7s	---	---	---	---	---	---	---	---	---
110:										
Ririe-----	3e	---	---	---	35.00	---	---	---	30.00	---
Buist-----	3e	---	---	---	35.00	---	---	---	30.00	---
111:										
Ririe-----	3e	---	---	---	---	---	---	---	30.00	---
Cedarhill-----	3e	---	---	---	---	---	---	---	30.00	---
112:										
Ririe-----	4e	---	---	---	---	---	---	---	25.00	---
Cedarhill-----	4e	---	---	---	---	---	---	---	25.00	---
113:										
Ririe-----	4e	---	1.50	---	30.00	---	---	---	25.00	---
Hondoho-----	3e	---	1.00	---	35.00	---	---	---	30.00	---
114:										
Ririe-----	3e	---	2.00	---	35.00	---	---	---	30.00	---
Iphil-----	3e	---	2.50	---	35.00	---	---	---	30.00	---
Kucera-----	3e	---	2.50	---	35.00	---	---	---	30.00	---
115:										
Ririe-----	3e	---	2.00	---	35.00	---	---	---	30.00	---
Iphil-----	3e	---	2.50	---	35.00	---	---	---	30.00	---

Table 5.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability		Alfalfa hay		Barley		Pasture		Wheat	
	N	I	N	I	N	I	N	I	N	I
			Tons	Tons	Bu	Bu	AUM	AUM	Bu	Bu
115: Rexburg-----	3e	---	2.00	---	40.00	---	---	---	35.00	---
116: Ririe-----	3e	4e	2.00	4.00	35.00	80.00	---	---	30.00	70.00
Rexburg-----	3e	4e	2.00	4.00	40.00	80.00	---	---	35.00	70.00
117: Ririe-----	3e	---	---	---	35.00	---	---	---	30.00	---
Watercanyon-----	3e	---	---	---	20.00	---	---	---	20.00	---
118: Ririe-----	6e	---	---	---	25.00	---	---	---	20.00	---
Watercanyon-----	6e	---	---	---	12.00	---	---	---	12.00	---
119: Samaria-----	3c	3c	1.50	3.00	35.00	65.00	---	---	30.00	60.00
120: Samaria-----	3e	3e	1.00	1.50	35.00	40.00	---	---	30.00	40.00
121: Samaria-----	3e	---	1.00	---	35.00	---	---	---	30.00	---
Pollynot-----	3e	---	1.00	---	35.00	---	---	---	35.00	---
122: Samaria-----	3e	---	---	---	35.00	---	---	---	30.00	---
Sterling-----	3e	---	---	---	30.00	---	---	---	30.00	---
123: Sterling-----	3e	---	---	---	30.00	---	---	---	30.00	---
124: Thatcher-----	4e	4e	---	4.00	35.00	70.00	---	---	30.00	60.00
125: Thatcher-----	6e	---	---	---	30.00	---	---	---	25.00	---
Jensen-----	4e	---	---	---	30.00	---	---	---	25.00	---
126: Freedom-----	6s	3s	---	3.50	---	50.00	---	7.00	---	60.00
127: Tickason-----	4c	2c	---	5.50	30.00	110.00	---	---	25.00	100.00
128: Tickason-----	4c	2e	---	5.50	25.00	110.00	---	---	20.00	100.00
129: Tirod-----	3c	2c	---	3.50	---	70.00	---	---	---	65.00
130: Toefoot-----	3e	---	1.00	---	35.00	---	2.50	---	30.00	---
131: Welby-----	3c	2c	2.00	4.00	35.00	80.00	---	---	30.00	70.00

[illegible]

Table 6.--Rangeland Productivity and Characteristic Plant Communities

(Only the soils that support rangeland vegetation suitable for grazing are listed)

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
4: Arbone-----	Loamy 13-16 Artrv/pssp6	1,800	1,400	700	Bluebunch wheatgrass----- Mountain big sagebrush----- Miscellaneous perennial grasses Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Lupine----- Prairie Junegrass-----	30 10 10 5 5 5 5 5
7: Bayhook-----	Loamy 8-11 Artrt/pssp6	800	550	300	Bluebunch wheatgrass----- Basin big sagebrush----- Arrowleaf balsamroot----- Longleaf hawksbeard----- Western wheatgrass-----	40 20 5 5 5
8: Bayhook-----	Loamy 8-11 Artrt/pssp6	800	550	300	Bluebunch wheatgrass----- Basin big sagebrush----- Arrowleaf balsamroot----- Longleaf hawksbeard----- Western wheatgrass-----	40 20 5 5 5
Ecur-----	Loamy 11-13 Artrt/pssp6	1,800	1,200	800	Bluebunch wheatgrass----- Basin big sagebrush----- Nevada bluegrass----- Antelope bitterbrush----- Helianthella----- Prairie Junegrass----- Western wheatgrass-----	35 15 5 5 5 5 5
11: Bloor-----	Alkali Flats 8-12 Atco/e1e15	500	350	175	Bottlebrush squirreltail----- Shadscale saltbush----- Black greasewood----- Basin big sagebrush-----	25 25 10 5
Brinnum-----	Semiwet Saline Meadow	2,000	1,500	750	Inland saltgrass----- Alkali sacaton----- Black greasewood----- Bottlebrush squirreltail----- Gardner saltbush-----	25 15 10 5 5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
13:						
Bothwell-----	Loamy 16-22 Artrv/pssp6 16-22"	2,400	2,000	1,400	Bluebunch wheatgrass-----	35
					Mountain big sagebrush-----	10
					Utah snowberry-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Miscellaneous perennial forbs--	5
					Miscellaneous perennial grasses	5
					Prairie Junegrass-----	5
					Slender wheatgrass-----	5
					Sticky geranium-----	5
Hades-----	Loamy 16-22 Artrv/pssp6 16-22"	2,400	2,000	1,400	Bluebunch wheatgrass-----	45
					Miscellaneous perennial forbs--	10
					Miscellaneous perennial grasses	10
					Slender wheatgrass-----	10
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Mountain big sagebrush-----	5
					Miscellaneous shrubs-----	5
Justesen-----	Loamy 13-16 Artrv/pssp6	1,900	1,400	700	Bluebunch wheatgrass-----	35
					Mountain big sagebrush-----	10
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Prairie Junegrass-----	5
					Slender wheatgrass-----	5
					Snowberry-----	5
14:						
Brinnum-----	Semiwet Saline Meadow	2,000	1,500	750	Inland saltgrass-----	25
					Alkali sacaton-----	15
					Black greasewood-----	10
					Bottlebrush squirreltail-----	5
					Gardner saltbush-----	5
Logan-----	Wet Meadow	3,900	3,000	2,400	Sedge-----	20
					Tufted hairgrass-----	15
					Baltic rush-----	5
					Cinquefoil-----	5
					Clover-----	5
					Fowl bluegrass-----	5
					Slender wheatgrass-----	5
					Western wheatgrass-----	5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
14: Langless-----	Wet Meadow	3,900	3,000	2,400	Sedge----- Tufted hairgrass----- Baltic rush----- Cinquefoil----- Clover----- Shrubby cinquefoil----- Slender wheatgrass----- Willow-----	20 15 5 5 5 5 5 5
16: Buist-----	Loamy 12-16 Artrt/pssp6	1,800	1,400	700	Bluebunch wheatgrass----- Basin big sagebrush----- Antelope bitterbrush----- Arrowleaf balsamroot----- Prairie Junegrass----- Western wheatgrass-----	35 20 5 5 5 5
17: Calpac-----	Steep Slope 16-22 Artrv/pssp6	2,200	1,900	1,300	Bluebunch wheatgrass----- Mountain big sagebrush----- Columbia needlegrass----- Arrowleaf balsamroot----- Geranium----- Mountain brome----- Prairie Junegrass----- Slender wheatgrass----- Snowberry-----	35 10 5 5 5 5 5 5 5
Ridgecrest-----	Steep Slope 16-22 Artrv/pssp6	2,000	1,500	800	Bluebunch wheatgrass----- Mountain big sagebrush----- Antelope bitterbrush----- Mountain brome----- Slender wheatgrass-----	30 15 5 5 5
Ireland-----	Steep Slope 16-22 Artrv/pssp6	2,000	1,500	850	Bluebunch wheatgrass----- Mountain big sagebrush----- Nevada bluegrass----- Utah snowberry----- Arrowleaf balsamroot----- Longleaf hawksbeard----- Slender wheatgrass-----	25 15 5 5 5 5 5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
18: Cedarhill-----	Gravelly Loam 16-22 Artrv/pssp6	1,100	800	500	Bluebunch wheatgrass----- Mountain big sagebrush----- Western wheatgrass----- Nevada bluegrass----- Arrowleaf balsamroot----- Prairie Junegrass-----	35 10 10 5 5 5
19: Cedarhill-----	Gravelly Loam 16-22 Artrv/pssp6	1,100	800	500	Bluebunch wheatgrass----- Mountain big sagebrush----- Western wheatgrass----- Nevada bluegrass----- Arrowleaf balsamroot----- Prairie Junegrass-----	35 10 10 5 5 5
20: Cedarhill-----	Gravelly Loam 16-22 Artrv/pssp6	1,100	800	500	Bluebunch wheatgrass----- Mountain big sagebrush----- Western wheatgrass----- Nevada bluegrass----- Arrowleaf balsamroot----- Prairie Junegrass-----	35 10 10 5 5 5
Hymas-----	Shallow Stony 12-16 Arar8/pssp6	1,000	600	300	Bluebunch wheatgrass----- Low sagebrush----- Antelope bitterbrush----- Arrowleaf balsamroot----- Longleaf hawksbeard----- Spiny phlox-----	35 10 5 5 5 5
21: Cedarhill-----	Gravelly Loam 16-22 Artrv/pssp6	1,100	800	500	Bluebunch wheatgrass----- Mountain big sagebrush----- Western wheatgrass----- Nevada bluegrass----- Arrowleaf balsamroot----- Prairie Junegrass-----	35 10 10 5 5 5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
21: Lostine-----	Loamy 13-16 Artrv/pssp6	1,800	1,200	800	Bluebunch wheatgrass----- Idaho fescue----- Arrowleaf balsamroot----- Miscellaneous perennial grasses Columbia needlegrass----- Mountain big sagebrush----- Miscellaneous shrubs----- Prairie Junegrass----- Miscellaneous perennial forbs-- Sticky geranium-----	30 10 10 10 5 5 5 5 3 2
24: Copenhagen-----	Shallow Loamy 13-16 Artrv/pssp6	850	650	350	Bluebunch wheatgrass----- Mountain big sagebrush----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Green rabbitbrush----- Longleaf hawksbeard-----	30 20 5 5 5 5 5
Lonigan-----	Ashy Loam 13-16 Artrv/pssp6	1,400	1,000	500	Bluebunch wheatgrass----- Mountain big sagebrush----- Arrowleaf balsamroot----- Antelope bitterbrush-----	25 20 10 5
Manila-----	Loamy 16-22 Artrv/pssp6 16-22"	2,200	1,700	1,000	Bluebunch wheatgrass----- Mountain big sagebrush----- Columbia needlegrass----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Prairie Junegrass----- Slender wheatgrass----- Sticky geranium-----	30 10 5 5 5 5 5 5 5
25: Darkbull-----	Loamy 11-13 Artrt/pssp6	1,400	700	500	Bluebunch wheatgrass----- Basin big sagebrush----- Antelope bitterbrush----- Arrowleaf balsamroot----- Bottlebrush squirreltail-----	45 15 5 5 5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
25:						
Pyrat-----	Limestone Gravelly 12-16 Arno4/pssp6	900	550	400	Bluebunch wheatgrass-----	35
					Black sagebrush-----	25
					Nevada bluegrass-----	5
					Spiny phlox-----	5
Ecur-----	Loamy 11-13 Artrt/pssp6	1,800	1,200	800	Bluebunch wheatgrass-----	35
					Basin big sagebrush-----	15
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Helianthella-----	5
					Prairie Junegrass-----	5
					Western wheatgrass-----	5
26:						
DeJarnet-----	Loamy 11-13 Artrt/pssp6	1,300	800	500	Bluebunch wheatgrass-----	45
					Basin big sagebrush-----	15
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Bottlebrush squirreltail-----	5
28:						
Ecur-----	Sandy 8-12 Juos/artrt/achy	900	650	300	Bluebunch wheatgrass-----	45
					Indian ricegrass-----	25
					Utah juniper-----	5
					Antelope bitterbrush-----	5
					Basin big sagebrush-----	5
					Western wheatgrass-----	5
29:						
Ecur-----	Loamy 11-13 Artrt/pssp6	1,800	1,200	800	Bluebunch wheatgrass-----	35
					Basin big sagebrush-----	15
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Helianthella-----	5
					Prairie Junegrass-----	5
					Western wheatgrass-----	5
Darkbull-----	Loamy 11-13 Artrt/pssp6	1,400	700	500	Bluebunch wheatgrass-----	45
					Basin big sagebrush-----	15
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Bottlebrush squirreltail-----	5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
32:						
Elevator-----	Loamy 12-16 Artrt/pssp6	1,900	1,400	700	Bluebunch wheatgrass-----	35
					Basin big sagebrush-----	15
					Nevada bluegrass-----	10
					Arrowleaf balsamroot-----	5
					Prairie Junegrass-----	5
					Streambank wheatgrass-----	5
Jensen-----	Loamy 12-16 Artrt/pssp6	1,900	1,400	700	Bluebunch wheatgrass-----	35
					Basin big sagebrush-----	15
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Prairie Junegrass-----	5
					Western wheatgrass-----	5
36:						
Highcreek-----	Loamy 11-13 Artrt/pssp6	1,200	900	500	Bluebunch wheatgrass-----	35
					Basin big sagebrush-----	15
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Prairie Junegrass-----	5
					Western wheatgrass-----	5
Sterling-----	Loamy 12-16 Artrt/pssp6	1,500	1,100	800	Bluebunch wheatgrass-----	35
					Basin big sagebrush-----	15
					Nevada bluegrass-----	10
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Prairie Junegrass-----	5
					Western wheatgrass-----	5
37:						
Highcreek-----	Loamy 11-13 Artrt/pssp6	1,200	900	500	Bluebunch wheatgrass-----	35
					Basin big sagebrush-----	15
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Prairie Junegrass-----	5
					Western wheatgrass-----	5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
37: Sterling-----	Loamy 12-16 Artrt/pssp6	1,500	1,100	800	Bluebunch wheatgrass----- Basin big sagebrush----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Prairie Junegrass----- Western wheatgrass-----	35 15 5 5 5 5 5
38: Hillfield-----	Loamy 11-13 Artrt/pssp6	1,200	900	500	Bluebunch wheatgrass----- Basin big sagebrush----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Helianthella----- Prairie Junegrass-----	30 15 5 5 5 5 5
Kucera-----	Loamy 11-13 Artrt/pssp6	1,600	900	500	Bluebunch wheatgrass----- Basin big sagebrush----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Green rabbitbrush----- Needlegrass-----	30 15 5 5 5 5 5
39: Hillfield-----	Loamy 11-13 Artrt/pssp6	1,200	900	500	Bluebunch wheatgrass----- Basin big sagebrush----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Helianthella----- Prairie Junegrass-----	30 15 5 5 5 5 5
Kucera-----	Loamy 11-13 Artrt/pssp6	1,600	900	500	Bluebunch wheatgrass----- Basin big sagebrush----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Green rabbitbrush----- Needlegrass-----	30 15 5 5 5 5 5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
40:						
Hondoho-----	Steep Slope 16-22 Artrv/pssp6	2,100	1,600	800	Bluebunch wheatgrass----- Mountain big sagebrush----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Longleaf hawksbeard----- Prairie Junegrass-----	30 15 5 5 5 5 5
Calpac-----	Steep Slope 16-22 Artrv/pssp6	2,200	1,900	1,300	Bluebunch wheatgrass----- Mountain big sagebrush----- Columbia needlegrass----- Arrowleaf balsamroot----- Geranium----- Mountain brome----- Prairie Junegrass----- Slender wheatgrass----- Snowberry-----	35 10 5 5 5 5 5 5 5
Lizdale-----	Steep Slope 16-22 Artrv/pssp6	2,400	1,800	900	Bluebunch wheatgrass----- Mountain big sagebrush----- Nevada bluegrass----- Utah snowberry----- Antelope bitterbrush----- Arrowleaf balsamroot----- Slender wheatgrass-----	30 15 5 5 5 5 5
41:						
Hondoho-----	Steep Slope 16-22 Artrv/pssp6	2,100	1,600	800	Bluebunch wheatgrass----- Mountain big sagebrush----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Longleaf hawksbeard----- Prairie Junegrass-----	30 15 5 5 5 5 5
Hymas-----	Shallow Stony 12-16 Arar8/pssp6	1,000	600	300	Bluebunch wheatgrass----- Low sagebrush----- Antelope bitterbrush----- Arrowleaf balsamroot----- Longleaf hawksbeard----- Spiny phlox-----	35 10 5 5 5 5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
41: Pavohroo-----	Moist Mountain Loam 20+ Potr5	2,500	1,500	900	Blue wildrye----- Mountain brome----- Woods' rose----- Common snowberry----- Quaking aspen----- Slender wheatgrass----- Sticky geranium----- Willow-----	10 10 5 5 5 5 5 5
42: Hondoho-----	Steep Slope 16-22 Artrv/pssp6	2,100	1,600	800	Bluebunch wheatgrass----- Mountain big sagebrush----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Longleaf hawksbeard----- Prairie Junegrass-----	30 15 5 5 5 5 5
Hymas-----	Shallow Stony 12-16 Arar8/pssp6	1,000	600	300	Bluebunch wheatgrass----- Low sagebrush----- Antelope bitterbrush----- Arrowleaf balsamroot----- Longleaf hawksbeard----- Spiny phlox-----	35 10 5 5 5 5
Pavohroo-----	Moist Mountain Loam 20+ Potr5	2,500	1,500	900	Blue wildrye----- Mountain brome----- Woods' rose----- Common snowberry----- Quaking aspen----- Slender wheatgrass----- Sticky geranium----- Willow-----	10 10 5 5 5 5 5 5
43: Hondoho-----	Steep Slope 16-22 Artrv/pssp6	2,100	1,600	800	Bluebunch wheatgrass----- Mountain big sagebrush----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Longleaf hawksbeard----- Prairie Junegrass-----	30 15 5 5 5 5 5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
43:						
Ridgecrest-----	Loamy 16-22 Artrv/pssp6 16-22"	2,300	1,700	900	Bluebunch wheatgrass-----	30
					Columbia needlegrass-----	10
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Mountain big sagebrush-----	5
					Mountain brome-----	5
					Prairie Junegrass-----	5
					Slender wheatgrass-----	5
Hades-----	Loamy 16-22 Artrv/pssp6 16-22"	2,400	2,000	1,400	Bluebunch wheatgrass-----	45
					Miscellaneous perennial forbs--	10
					Miscellaneous perennial grasses	10
					Slender wheatgrass-----	10
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Mountain big sagebrush-----	5
					Miscellaneous shrubs-----	5
44:						
Hutchley-----	Shallow Loamy 13-16 Artrv/pssp6	900	600	350	Bluebunch wheatgrass-----	30
					Mountain big sagebrush-----	20
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Dwarf green rabbitbrush-----	5
McCarey-----	Loamy 13-16 Artrv/pssp6	1,800	1,200	800	Bluebunch wheatgrass-----	35
					Mountain big sagebrush-----	10
					Utah snowberry-----	5
					Antelope bitterbrush-----	5
					Helianthella-----	5
					Prairie Junegrass-----	5
					Slender wheatgrass-----	5
Araveton-----	Loamy 13-16 Artrv/pssp6	1,800	1,200	800	Bluebunch wheatgrass-----	35
					Mountain big sagebrush-----	10
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Prairie Junegrass-----	5
					Slender wheatgrass-----	5
					Snowberry-----	5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
45:						
Hymas-----	Shallow Stony 12-16 Arar8/pssp6	1,000	600	300	Bluebunch wheatgrass-----	35
					Low sagebrush-----	10
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Longleaf hawksbeard-----	5
					Spiny phlox-----	5
Calpac-----	Steep Slope 16-22 Artrv/pssp6	2,200	1,900	1,300	Bluebunch wheatgrass-----	35
					Mountain big sagebrush-----	10
					Columbia needlegrass-----	5
					Arrowleaf balsamroot-----	5
					Geranium-----	5
					Mountain brome-----	5
					Prairie Junegrass-----	5
					Slender wheatgrass-----	5
					Snowberry-----	5
Ireland-----	Steep Slope 16-22 Artrv/pssp6	2,000	1,500	850	Bluebunch wheatgrass-----	25
					Mountain big sagebrush-----	15
					Nevada bluegrass-----	5
					Utah snowberry-----	5
					Arrowleaf balsamroot-----	5
					Longleaf hawksbeard-----	5
					Slender wheatgrass-----	5
46:						
Hymas-----	Shallow Stony 12-16 Arar8/pssp6	1,000	600	300	Bluebunch wheatgrass-----	35
					Low sagebrush-----	10
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Longleaf hawksbeard-----	5
					Spiny phlox-----	5
Northwater-----	Mountain Loamy 22+ Psmeg/syor2	500	350	150	Oregongrape-----	10
					Boxleaf myrtle-----	10
					Mallow ninebark-----	10
					Whortleleaf snowberry-----	10
					Douglas fir-----	5
					Rocky Mountain maple-----	5
					Bearded wheatgrass-----	5
					Strawberry-----	5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
46: Clayburn-----	Loamy 16-22 Artrv/pssp6 16-22"	2,400	2,000	1,400	Bluebunch wheatgrass----- Mountain big sagebrush----- Columbia needlegrass----- Utah snowberry----- Arrowleaf balsamroot----- Mountain brome----- Sticky geranium-----	35 10 5 5 5 5 5
47: Hymas-----	Shallow Stony 12-16 Arar8/pssp6	1,000	600	300	Bluebunch wheatgrass----- Low sagebrush----- Antelope bitterbrush----- Arrowleaf balsamroot----- Longleaf hawksbeard----- Spiny phlox-----	35 10 5 5 5 5
Povey-----	Steep Slope 16-22 Artrv/pssp6	2,400	1,800	900	Bluebunch wheatgrass----- Mountain big sagebrush----- Slender wheatgrass----- Columbia needlegrass----- Arrowleaf balsamroot----- Snowberry-----	25 15 10 5 5 5
48: Hymas-----	Shallow Stony 12-16 Arar8/pssp6	1,000	600	300	Bluebunch wheatgrass----- Low sagebrush----- Antelope bitterbrush----- Arrowleaf balsamroot----- Longleaf hawksbeard----- Spiny phlox-----	35 10 5 5 5 5
Povey-----	Steep Slope 16-22 Artrv/pssp6	2,400	1,800	900	Bluebunch wheatgrass----- Mountain big sagebrush----- Slender wheatgrass----- Columbia needlegrass----- Arrowleaf balsamroot----- Snowberry-----	25 15 10 5 5 5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
48: Pavohroo-----	Moist Mountain Loam 20+ Potr5	2,500	1,500	900	Blue wildrye----- Mountain brome----- Woods' rose----- Common snowberry----- Quaking aspen----- Slender wheatgrass----- Sticky geranium----- Willow-----	10 10 5 5 5 5 5 5
49: Inkom-----	Riparian Wet Meadow Salix/carex	4,600	3,500	2,000	Sedge----- Tufted hairgrass----- Baltic rush----- Cinquefoil----- Clover----- Shrubby cinquefoil----- Slender wheatgrass----- Willow-----	50 10 5 5 5 5 5 5
51: Ireland-----	Steep Slope 16-22 Artrv/pssp6	2,000	1,500	850	Bluebunch wheatgrass----- Mountain big sagebrush----- Nevada bluegrass----- Utah snowberry----- Arrowleaf balsamroot----- Longleaf hawksbeard----- Slender wheatgrass-----	25 15 5 5 5 5 5
Calpac-----	Steep Slope 16-22 Artrv/pssp6	2,200	1,900	1,300	Bluebunch wheatgrass----- Mountain big sagebrush----- Columbia needlegrass----- Arrowleaf balsamroot----- Geranium----- Mountain brome----- Prairie Junegrass----- Slender wheatgrass----- Snowberry-----	35 10 5 5 5 5 5 5 5
55: Jovine-----	Loamy Bottom 12-16 Artrt/leci4-Agrop	1,600	1,200	600	Basin big sagebrush----- Basin wildrye----- Thickspike wheatgrass----- Bluebunch wheatgrass----- Green rabbitbrush----- Western wheatgrass-----	20 15 15 5 5 5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
56: Justesen-----	Loamy 13-16 Artrv/pssp6	1,900	1,400	700	Bluebunch wheatgrass----- Mountain big sagebrush----- Antelope bitterbrush----- Arrowleaf balsamroot----- Prairie Junegrass----- Slender wheatgrass----- Snowberry-----	35 10 5 5 5 5 5
57: Justesen-----	Loamy 13-16 Artrv/pssp6	1,900	1,400	700	Bluebunch wheatgrass----- Mountain big sagebrush----- Antelope bitterbrush----- Arrowleaf balsamroot----- Prairie Junegrass----- Slender wheatgrass----- Snowberry-----	35 10 5 5 5 5 5
62: Kidman-----	Sand 12-16 Putr2/achy	1,200	900	500	Indian ricegrass----- Basin big sagebrush----- Needleandthread----- Antelope bitterbrush----- Arrowleaf balsamroot----- Bluebunch wheatgrass----- Western wheatgrass-----	20 15 15 10 5 5 5
Preston-----	Sand 8-12 Artrt/achy	800	600	300	Indian ricegrass----- Needleandthread----- Basin big sagebrush----- Western wheatgrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Lemon scurfpea-----	35 20 15 10 5 5 5
65: Langless-----	Wet Meadow	3,900	3,000	2,400	Sedge----- Tufted hairgrass----- Baltic rush----- Cinquefoil----- Clover----- Shrubby cinquefoil----- Slender wheatgrass----- Willow-----	20 15 5 5 5 5 5 5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
66:						
Langless-----	Wet Meadow	3,900	3,000	2,400	Sedge-----	20
					Tufted hairgrass-----	15
					Baltic rush-----	5
					Cinquefoil-----	5
					Clover-----	5
					Shrubby cinquefoil-----	5
					Slender wheatgrass-----	5
					Willow-----	5
Logan-----	Wet Meadow	3,900	3,000	2,400	Sedge-----	20
					Tufted hairgrass-----	15
					Baltic rush-----	5
					Cinquefoil-----	5
					Clover-----	5
					Fowl bluegrass-----	5
					Slender wheatgrass-----	5
					Western wheatgrass-----	5
70:						
Logan-----	Wet Meadow	3,900	3,000	2,400	Sedge-----	20
					Tufted hairgrass-----	15
					Baltic rush-----	5
					Cinquefoil-----	5
					Clover-----	5
					Fowl bluegrass-----	5
					Slender wheatgrass-----	5
					Western wheatgrass-----	5
71:						
Lonigan-----	Ashy Loam 13-16 Artrv/pssp6	1,400	1,000	500	Bluebunch wheatgrass-----	25
					Mountain big sagebrush-----	20
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
Lizdale-----	Loamy 16-22 Artrv/pssp6 16-22"	2,600	2,000	1,000	Bluebunch wheatgrass-----	35
					Arrowleaf balsamroot-----	10
					Mountain big sagebrush-----	10
					Utah snowberry-----	5
					Antelope bitterbrush-----	5
					Slender wheatgrass-----	5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
72: Lostine-----	Loamy 13-16 Artrv/pssp6	1,800	1,200	800	Bluebunch wheatgrass----- Idaho fescue----- Arrowleaf balsamroot----- Miscellaneous perennial grasses Columbia needlegrass----- Mountain big sagebrush----- Miscellaneous shrubs----- Prairie Junegrass----- Miscellaneous perennial forbs-- Sticky geranium-----	30 10 10 10 5 5 5 5 3 2
73: Manila-----	Loamy 16-22 Artrv/pssp6 16-22"	2,600	2,000	1,200	Bluebunch wheatgrass----- Mountain big sagebrush----- Columbia needlegrass----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Prairie Junegrass----- Slender wheatgrass----- Sticky geranium-----	40 10 5 5 5 5 5 5 5
74: Manila-----	Loamy 16-22 Artrv/pssp6 16-22"	2,600	2,000	1,200	Bluebunch wheatgrass----- Mountain big sagebrush----- Columbia needlegrass----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Prairie Junegrass----- Slender wheatgrass----- Sticky geranium-----	40 10 5 5 5 5 5 5 5
Broadhead-----	Loamy 16-22 Artrv/pssp6 16-22"	2,400	2,000	1,400	Bluebunch wheatgrass----- Mountain big sagebrush----- Columbia needlegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Geranium----- Slender wheatgrass----- Snowberry-----	35 10 5 5 5 5 5 5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
75:						
Manila-----	Loamy 16-22 Artrv/pssp6 16-22"	2,600	2,000	1,200	Bluebunch wheatgrass-----	40
					Mountain big sagebrush-----	10
					Columbia needlegrass-----	5
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Prairie Junegrass-----	5
					Slender wheatgrass-----	5
					Sticky geranium-----	5
Broadhead-----	Loamy 16-22 Artrv/pssp6 16-22"	2,400	2,000	1,400	Bluebunch wheatgrass-----	35
					Mountain big sagebrush-----	10
					Columbia needlegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Geranium-----	5
					Slender wheatgrass-----	5
					Snowberry-----	5
76:						
Manila-----	Loamy 16-22 Artrv/pssp6 16-22"	2,600	2,000	1,200	Bluebunch wheatgrass-----	40
					Mountain big sagebrush-----	10
					Columbia needlegrass-----	5
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Prairie Junegrass-----	5
					Slender wheatgrass-----	5
					Sticky geranium-----	5
Lonigan-----	Ashy Loam 13-16 Artrv/pssp6	1,400	1,000	500	Bluebunch wheatgrass-----	25
					Mountain big sagebrush-----	20
					Arrowleaf balsamroot-----	10
					Antelope bitterbrush-----	5
77:						
Manila-----	Loamy 16-22 Artrv/pssp6 16-22"	2,600	2,000	1,200	Bluebunch wheatgrass-----	40
					Mountain big sagebrush-----	10
					Columbia needlegrass-----	5
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Prairie Junegrass-----	5
					Slender wheatgrass-----	5
					Sticky geranium-----	5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
77: Obnot-----	Loamy 16-22 Artrv/pssp6 16-22"	2,400	2,000	1,400	Bluebunch wheatgrass----- Arrowleaf balsamroot----- Mountain big sagebrush----- Utah snowberry----- Antelope bitterbrush----- Prairie Junegrass----- Slender wheatgrass-----	35 10 10 5 5 5 5
78: Manila-----	Loamy 16-22 Artrv/pssp6 16-22"	2,600	2,000	1,200	Bluebunch wheatgrass----- Mountain big sagebrush----- Columbia needlegrass----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Prairie Junegrass----- Slender wheatgrass----- Sticky geranium-----	40 10 5 5 5 5 5 5 5
Yago-----	Stony Loam 16-22 Artrv/pssp6	1,800	1,100	600	Bluebunch wheatgrass----- Mountain big sagebrush----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Prairie Junegrass----- Slender wheatgrass----- Snowberry-----	30 10 5 5 5 5 5 5
79: Manila-----	Loamy 16-22 Artrv/pssp6 16-22"	2,600	2,000	1,200	Bluebunch wheatgrass----- Mountain big sagebrush----- Columbia needlegrass----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Prairie Junegrass----- Slender wheatgrass----- Sticky geranium-----	40 10 5 5 5 5 5 5 5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
79:						
Yago-----	Stony Loam 16-22 Artrv/pssp6	1,800	1,100	600	Bluebunch wheatgrass-----	30
					Mountain big sagebrush-----	10
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Prairie Junegrass-----	5
					Slender wheatgrass-----	5
					Snowberry-----	5
80:						
Mellor-----	Alkali Flats 8-12 Atco/e1e15	500	350	200	Bottlebrush squirreltail-----	25
					Shadscale saltbush-----	25
					Black greasewood-----	15
					Sand dropseed-----	5
					Scarlet globemallow-----	5
					Winterfat-----	5
Freedom-----	Loamy 8-11 Artrt/pssp6	800	600	300	Bluebunch wheatgrass-----	40
					Basin big sagebrush-----	15
					Bottlebrush squirreltail-----	5
					Longleaf hawksbeard-----	5
					Miscellaneous shrubs-----	5
81:						
Neeley-----	Loamy 11-13 Artrt/pssp6	1,100	800	400	Bluebunch wheatgrass-----	40
					Basin big sagebrush-----	15
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Bottlebrush squirreltail-----	5
82:						
Northwater-----	Mountain Loamy 22+ Psmeg/syor2	500	350	150	Oregongrape-----	10
					Boxleaf myrtle-----	10
					Mallow ninebark-----	10
					Whortleleaf snowberry-----	10
					Douglas fir-----	5
					Rocky Mountain maple-----	5
					Bearded wheatgrass-----	5
					Strawberry-----	5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
82:						
Povey-----	Steep Slope 16-22 Artrv/pssp6	2,400	1,800	900	Bluebunch wheatgrass-----	25
					Mountain big sagebrush-----	15
					Slender wheatgrass-----	10
					Columbia needlegrass-----	5
					Arrowleaf balsamroot-----	5
					Snowberry-----	5
Pavohroo-----	Moist Mountain Loam 20+ Potr5	2,500	1,500	900	Blue wildrye-----	10
					Mountain brome-----	10
					Woods' rose-----	5
					Common snowberry-----	5
					Quaking aspen-----	5
					Slender wheatgrass-----	5
					Sticky geranium-----	5
					Willow-----	5
86:						
Parleys-----	Loamy 12-16 Artrt/pssp6	1,800	1,200	800	Bluebunch wheatgrass-----	35
					Basin big sagebrush-----	15
					Nevada bluegrass-----	10
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Western wheatgrass-----	5
Welby-----	Loamy 12-16 Artrt/pssp6	1,800	1,200	800	Bluebunch wheatgrass-----	35
					Basin big sagebrush-----	15
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Longleaf hawksbeard-----	5
					Prairie Junegrass-----	5
					Western wheatgrass-----	5
88:						
Pavohroo-----	Moist Mountain Loam 20+ Potr5	2,500	1,500	900	Blue wildrye-----	10
					Mountain brome-----	10
					Woods' rose-----	5
					Common snowberry-----	5
					Quaking aspen-----	5
					Slender wheatgrass-----	5
					Sticky geranium-----	5
					Willow-----	5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
88: Povey-----	Steep Slope 16-22 Artrv/pssp6	2,400	1,800	900	Bluebunch wheatgrass----- Mountain big sagebrush----- Slender wheatgrass----- Columbia needlegrass----- Arrowleaf balsamroot----- Snowberry-----	25 15 10 5 5 5
89: Pavohroo-----	Moist Mountain Loam 20+ Potr5	2,500	1,500	900	Blue wildrye----- Mountain brome----- Woods' rose----- Common snowberry----- Quaking aspen----- Slender wheatgrass----- Sticky geranium----- Willow-----	10 10 5 5 5 5 5 5
Stines-----	Loamy 16-22 Artrv/pssp6 16-22"	2,100	1,700	1,200	Bluebunch wheatgrass----- Mountain big sagebrush----- Columbia needlegrass----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Geranium----- Slender wheatgrass----- Snowberry-----	40 10 5 5 5 5 5 5 5
Lonigan-----	Ashy Loam 13-16 Artrv/pssp6	1,400	1,000	500	Bluebunch wheatgrass----- Mountain big sagebrush----- Arrowleaf balsamroot----- Antelope bitterbrush-----	25 20 10 5
91: Povey-----	Loamy 16-22 Artrv/pssp6 16-22"	2,600	2,000	1,000	Bluebunch wheatgrass----- Mountain big sagebrush----- Columbia needlegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Slender wheatgrass----- Snowberry-----	35 10 5 5 5 5 5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
91:						
Hades-----	Loamy 16-22 Artrv/pssp6 16-22"	2,400	2,000	1,400	Bluebunch wheatgrass-----	45
					Miscellaneous perennial forbs--	10
					Miscellaneous perennial grasses	10
					Slender wheatgrass-----	10
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Mountain big sagebrush-----	5
					Miscellaneous shrubs-----	5
Hondoho-----	Steep Slope 16-22 Artrv/pssp6	2,100	1,600	800	Bluebunch wheatgrass-----	30
					Mountain big sagebrush-----	15
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Longleaf hawksbeard-----	5
					Prairie Junegrass-----	5
92:						
Povey-----	Steep Slope 16-22 Artrv/pssp6	2,400	1,800	900	Bluebunch wheatgrass-----	25
					Mountain big sagebrush-----	15
					Slender wheatgrass-----	10
					Columbia needlegrass-----	5
					Arrowleaf balsamroot-----	5
					Snowberry-----	5
Ireland-----	Steep Slope 16-22 Artrv/pssp6	2,000	1,500	850	Bluebunch wheatgrass-----	25
					Mountain big sagebrush-----	15
					Nevada bluegrass-----	5
					Utah snowberry-----	5
					Arrowleaf balsamroot-----	5
					Longleaf hawksbeard-----	5
					Slender wheatgrass-----	5
Calpac-----	Steep Slope 16-22 Artrv/pssp6	2,200	1,900	1,300	Bluebunch wheatgrass-----	35
					Mountain big sagebrush-----	10
					Columbia needlegrass-----	5
					Arrowleaf balsamroot-----	5
					Geranium-----	5
					Mountain brome-----	5
					Prairie Junegrass-----	5
					Slender wheatgrass-----	5
					Snowberry-----	5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
93: Povey-----	Steep Slope 16-22 Artrv/pssp6	2,400	1,800	900	Bluebunch wheatgrass----- Mountain big sagebrush----- Slender wheatgrass----- Columbia needlegrass----- Arrowleaf balsamroot----- Snowberry-----	25 15 10 5 5 5
Pavohroo-----	Moist Mountain Loam 20+ Potr5	2,500	1,500	900	Blue wildrye----- Mountain brome----- Woods' rose----- Common snowberry----- Quaking aspen----- Slender wheatgrass----- Sticky geranium----- Willow-----	10 10 5 5 5 5 5 5
95: Raldridge-----	Loamy 11-13 Artrt/pssp6	1,400	700	500	Bluebunch wheatgrass----- Basin big sagebrush----- Arrowleaf balsamroot----- Antelope bitterbrush----- Bottlebrush squirreltail-----	45 20 10 5 5
97: Rexburg-----	Loamy 13-16 Artrv/pssp6	1,800	1,200	800	Bluebunch wheatgrass----- Miscellaneous perennial grasses Mountain big sagebrush----- Miscellaneous perennial forbs-- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Needlegrass----- Miscellaneous shrubs----- Prairie Junegrass----- Western wheatgrass-----	30 15 10 10 5 5 5 5 5 5 5
Arbone-----	Loamy 13-16 Artrv/pssp6	1,800	1,400	700	Bluebunch wheatgrass----- Mountain big sagebrush----- Miscellaneous perennial grasses Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Lupine----- Prairie Junegrass-----	30 10 10 5 5 5 5 5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
97:						
Ririe-----	Loamy 13-16 Artrv/pssp6	1,800	1,200	800	Bluebunch wheatgrass-----	30
					Miscellaneous perennial grasses	15
					Mountain big sagebrush-----	10
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Needlegrass-----	5
					Miscellaneous perennial forbs--	5
					Miscellaneous shrubs-----	5
					Prairie Junegrass-----	5
					Slender wheatgrass-----	5
					Western wheatgrass-----	5
98:						
Rexburg-----	Loamy 13-16 Artrv/pssp6	1,800	1,200	800	Bluebunch wheatgrass-----	30
					Miscellaneous perennial grasses	15
					Mountain big sagebrush-----	10
					Miscellaneous perennial forbs--	10
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Needlegrass-----	5
					Miscellaneous shrubs-----	5
					Prairie Junegrass-----	5
					Western wheatgrass-----	5
Arbone-----	Loamy 13-16 Artrv/pssp6	1,800	1,400	700	Bluebunch wheatgrass-----	30
					Mountain big sagebrush-----	10
					Miscellaneous perennial grasses	10
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Lupine-----	5
					Prairie Junegrass-----	5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
98:						
Ririe-----	Loamy 13-16 Artrv/pssp6	1,800	1,200	800	Bluebunch wheatgrass-----	30
					Miscellaneous perennial grasses	15
					Mountain big sagebrush-----	10
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Needlegrass-----	5
					Miscellaneous perennial forbs--	5
					Miscellaneous shrubs-----	5
					Prairie Junegrass-----	5
					Slender wheatgrass-----	5
					Western wheatgrass-----	5
106:						
Ridgecrest-----	Steep Slope 16-22 Artrv/pssp6	2,000	1,500	800	Bluebunch wheatgrass-----	30
					Mountain big sagebrush-----	15
					Antelope bitterbrush-----	5
					Mountain brome-----	5
					Slender wheatgrass-----	5
Hondoho-----	Steep Slope 16-22 Artrv/pssp6	2,100	1,600	800	Bluebunch wheatgrass-----	30
					Mountain big sagebrush-----	15
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Longleaf hawksbeard-----	5
					Prairie Junegrass-----	5
107:						
Ridgecrest-----	Steep Slope 16-22 Artrv/pssp6	2,000	1,500	800	Bluebunch wheatgrass-----	30
					Mountain big sagebrush-----	15
					Antelope bitterbrush-----	5
					Mountain brome-----	5
					Slender wheatgrass-----	5
Hondoho-----	Steep Slope 16-22 Artrv/pssp6	2,100	1,600	800	Bluebunch wheatgrass-----	30
					Mountain big sagebrush-----	15
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Longleaf hawksbeard-----	5
					Prairie Junegrass-----	5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
107: Hymas-----	Shallow Stony 12-16 Arar8/pssp6	1,000	600	300	Bluebunch wheatgrass----- Low sagebrush----- Antelope bitterbrush----- Arrowleaf balsamroot----- Longleaf hawksbeard----- Spiny phlox-----	35 10 5 5 5 5
108: Ridgecrest-----	Steep Slope 16-22 Artrv/pssp6	2,000	1,500	800	Bluebunch wheatgrass----- Mountain big sagebrush----- Antelope bitterbrush----- Mountain brome----- Slender wheatgrass-----	30 15 5 5 5
Hondoho-----	Steep Slope 16-22 Artrv/pssp6	2,100	1,600	800	Bluebunch wheatgrass----- Mountain big sagebrush----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Longleaf hawksbeard----- Prairie Junegrass-----	30 15 5 5 5 5 5
Lizdale-----	Steep Slope 16-22 Artrv/pssp6	2,400	1,800	900	Bluebunch wheatgrass----- Mountain big sagebrush----- Nevada bluegrass----- Utah snowberry----- Antelope bitterbrush----- Arrowleaf balsamroot----- Slender wheatgrass-----	30 15 5 5 5 5 5
109: Ridgecrest-----	Steep Slope 16-22 Artrv/pssp6	2,000	1,500	800	Bluebunch wheatgrass----- Mountain big sagebrush----- Antelope bitterbrush----- Mountain brome----- Slender wheatgrass-----	30 15 5 5 5
Hymas-----	Shallow Juniper Breaks 13-16 Juos/artrv/pssp6	700	500	250	Bluebunch wheatgrass----- Utah juniper----- Arrowleaf balsamroot----- Antelope bitterbrush----- Longleaf hawksbeard----- Mountain big sagebrush----- Spiny phlox-----	35 10 10 5 5 5 5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
110:						
Ririe-----	Loamy 13-16 Artrv/pssp6	1,500	1,200	800	Bluebunch wheatgrass-----	25
					Mountain big sagebrush-----	10
					Slender wheatgrass-----	10
					Idaho fescue-----	5
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Longleaf hawksbeard-----	5
					Needlegrass-----	5
					Miscellaneous perennial forbs--	5
					Miscellaneous perennial grasses	5
					Miscellaneous shrubs-----	5
					Prairie Junegrass-----	5
					Western wheatgrass-----	5
Buist-----	Loamy 13-16 Artrv/pssp6	1,700	1,100	700	Bluebunch wheatgrass-----	35
					Mountain big sagebrush-----	10
					Miscellaneous shrubs-----	10
					Idaho fescue-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Miscellaneous perennial forbs--	5
					Miscellaneous perennial grasses	5
					Prairie Junegrass-----	5
					Slender wheatgrass-----	5
117:						
Ririe-----	Loamy 13-16 Artrv/pssp6	1,800	1,200	800	Bluebunch wheatgrass-----	30
					Miscellaneous perennial grasses	15
					Mountain big sagebrush-----	10
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5
					Arrowleaf balsamroot-----	5
					Needlegrass-----	5
					Miscellaneous perennial forbs--	5
					Miscellaneous shrubs-----	5
					Prairie Junegrass-----	5
					Slender wheatgrass-----	5
					Western wheatgrass-----	5
Watercanyon-----	Shallow Loamy 13-16 Artrv/pssp6	950	700	350	Bluebunch wheatgrass-----	30
					Mountain big sagebrush-----	15
					Arrowleaf balsamroot-----	10
					Nevada bluegrass-----	5
					Antelope bitterbrush-----	5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
118: Ririe-----	Loamy 13-16 Artrv/pssp6	1,500	1,100	600	Bluebunch wheatgrass----- Mountain big sagebrush----- Miscellaneous perennial grasses Western snowberry----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Needlegrass----- Miscellaneous perennial forbs-- Miscellaneous shrubs----- Prairie Junegrass----- Slender wheatgrass----- Western wheatgrass-----	20 15 10 10 5 5 5 5 5 5 5 5 5
Watercanyon-----	Shallow Loamy 13-16 Artrv/pssp6	950	700	350	Bluebunch wheatgrass----- Mountain big sagebrush----- Arrowleaf balsamroot----- Nevada bluegrass----- Antelope bitterbrush-----	30 15 10 5 5
119: Samaria-----	Loamy 11-13 Artrt/pssp6	1,200	900	500	Bluebunch wheatgrass----- Basin big sagebrush----- Arrowleaf balsamroot----- Helianthella----- Prairie Junegrass----- Western wheatgrass-----	35 15 5 5 5 5
120: Samaria-----	Loamy 11-13 Artrt/pssp6	1,200	900	500	Bluebunch wheatgrass----- Basin big sagebrush----- Arrowleaf balsamroot----- Helianthella----- Prairie Junegrass----- Western wheatgrass-----	35 15 5 5 5 5
121: Samaria-----	Loamy 11-13 Artrt/pssp6	1,200	900	500	Bluebunch wheatgrass----- Basin big sagebrush----- Arrowleaf balsamroot----- Helianthella----- Prairie Junegrass----- Western wheatgrass-----	35 15 5 5 5 5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
121: Pollynot-----	Loamy 12-16 Artrt/pssp6	1,600	1,200	600	Bluebunch wheatgrass----- Basin big sagebrush----- Utah snowberry----- Antelope bitterbrush----- Arrowleaf balsamroot----- Longleaf hawksbeard----- Prairie Junegrass----- Slender wheatgrass-----	35 15 5 5 5 5 5 5
122: Samaria-----	Loamy 11-13 Artrt/pssp6	1,200	900	500	Bluebunch wheatgrass----- Basin big sagebrush----- Arrowleaf balsamroot----- Helianthella----- Prairie Junegrass----- Western wheatgrass-----	35 15 5 5 5 5
Sterling-----	Loamy 12-16 Artrt/pssp6	1,500	1,100	800	Bluebunch wheatgrass----- Basin big sagebrush----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Prairie Junegrass----- Western wheatgrass-----	35 15 10 5 5 5 5
123: Sterling-----	Loamy 12-16 Artrt/pssp6	1,500	1,100	800	Bluebunch wheatgrass----- Basin big sagebrush----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Prairie Junegrass----- Western wheatgrass-----	35 15 10 5 5 5 5
126: Freedom-----	Loamy 8-11 Artrt/pssp6	800	600	300	Bluebunch wheatgrass----- Basin big sagebrush----- Bottlebrush squirreltail----- Longleaf hawksbeard----- Miscellaneous shrubs-----	40 15 5 5 5

Table 6.--Rangeland Productivity and Characteristic Plant Communities--Continued

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/acre	Lb/acre	Lb/acre		Pct
127: Tickason-----	Loamy 11-13 Artrt/pssp6	1,200	900	500	Bluebunch wheatgrass----- Basin big sagebrush----- Antelope bitterbrush----- Arrowleaf balsamroot----- Bottlebrush squirreltail-----	45 15 5 5 5
128: Tickason-----	Loamy 11-13 Artrt/pssp6	1,200	900	500	Bluebunch wheatgrass----- Basin big sagebrush----- Antelope bitterbrush----- Arrowleaf balsamroot----- Bottlebrush squirreltail-----	45 15 5 5 5
132: Wursten-----	Loamy 12-16 Artrt/pssp6	1,800	1,200	800	Bluebunch wheatgrass----- Basin big sagebrush----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Prairie Junegrass-----	35 20 5 5 5 5
133: Yago-----	Stony Loam 16-22 Artrv/pssp6	1,800	1,100	600	Bluebunch wheatgrass----- Mountain big sagebrush----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Prairie Junegrass----- Slender wheatgrass----- Snowberry-----	30 10 5 5 5 5 5 5
Manila-----	Loamy 16-22 Artrv/pssp6 16-22"	2,200	1,700	1,000	Bluebunch wheatgrass----- Mountain big sagebrush----- Columbia needlegrass----- Nevada bluegrass----- Antelope bitterbrush----- Arrowleaf balsamroot----- Prairie Junegrass----- Slender wheatgrass----- Sticky geranium-----	30 10 5 5 5 5 5 5 5

Table 7.--Windbreaks and Environmental Plantings

(Only the soil suited to windbreaks and environmental plantings are listed. Absence of an entry indicates that trees generally do not grow to the given height)

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
1:					
Araveton-----	---	---	---	---	---
Hades-----	American plum; skunkbush sumac	Eastern redcedar; Russian olive; Siberian crabapple	Austrian pine; black locust; green ash; ponderosa pine; Scotch pine	---	---
5:					
Arbone-----	---	---	---	---	---
Hondoho-----	Common lilac; Rocky Mountain juniper; silver buffaloberry; skunkbush sumac	Austrian pine; black locust; blue spruce; green ash; honeylocust; ponderosa pine	Siberian elm	---	---
Cedarhill-----	---	---	---	---	---
6:					
Arbone-----	---	---	---	---	---
Hondoho-----	Common lilac; Rocky Mountain juniper; silver buffaloberry; skunkbush sumac	Austrian pine; black locust; blue spruce; green ash; honeylocust; ponderosa pine	Siberian elm	---	---
Cedarhill-----	---	---	---	---	---
11:					
Bloor-----	Common juniper	Arroyo willow; common lilac	Silver buffaloberry	Russian olive	Narrowleaf cottonwood; robusta cottonwood; Siberian elm
Brinum-----	---	---	---	---	---
13:					
Bothwell-----	---	---	---	---	---

Table 7.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
13: Hades-----	American plum; skunkbush sumac	Eastern redcedar; Russian olive; Siberian crabapple	Austrian pine; black locust; green ash; ponderosa pine; Scotch pine	---	---
Justesen-----	Common lilac; Nanking cherry; Tatarian honeysuckle	Rocky Mountain juniper	Blue spruce; Scotch pine	Golden willow; honeylocust; Russian olive	---
22: Collinston-----	Amur honeysuckle	Black locust; eastern redcedar; Rocky Mountain juniper; Russian olive	Austrian pine; blue spruce; green ash; Siberian elm	---	---
23: Collinston-----	Amur honeysuckle	Black locust; eastern redcedar; Rocky Mountain juniper; Russian olive	Austrian pine; blue spruce; green ash; Siberian elm	---	---
Kearns-----	---	---	---	---	---
34: Goosenawt-----	Common lilac; European privet; Tatarian honeysuckle	Rocky Mountain juniper	Scotch pine	Golden willow; honeylocust; idahybrid poplar; Russian olive	---
41: Hondoho-----	Common lilac; Rocky Mountain juniper; silver buffaloberry; skunkbush sumac	Austrian pine; black locust; blue spruce; green ash; honeylocust; ponderosa pine	Siberian elm	---	---
Hymas-----	---	---	---	---	---
Pavohroo-----	---	---	---	---	---

Table 7.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
56: Justesen-----	Common lilac; Nanking cherry; Tatarian honeysuckle	Rocky Mountain juniper	Blue spruce; Scotch pine	Golden willow; honeylocust; Russian olive	---
57: Justesen-----	Common lilac; Nanking cherry; Tatarian honeysuckle	Rocky Mountain juniper	Blue spruce; Scotch pine	Golden willow; honeylocust; Russian olive	---
58: Justesen-----	Common lilac; Nanking cherry; Tatarian honeysuckle	Rocky Mountain juniper	Blue spruce; Scotch pine	Golden willow; honeylocust; Russian olive	---
Ririe-----	---	---	---	---	---
Buist-----	---	---	---	---	---
64: Lagonot-----	Common lilac; European privet; Nanking cherry; Tatarian honeysuckle	---	Blue spruce; Norway spruce; Scotch pine	Golden willow; honeylocust; idahybrid poplar	---
69: Lanoak-----	---	---	---	---	---
Hondoho-----	Common lilac; Rocky Mountain juniper; silver buffaloberry; skunkbush sumac	Austrian pine; black locust; blue spruce; green ash; honeylocust; ponderosa pine	Siberian elm	---	---
81: Neeley-----	Common lilac; European privet; Nanking cherry; Tatarian honeysuckle	Rocky Mountain juniper	Blue spruce; green ash; Scotch pine	Golden willow; idahybrid poplar; Russian olive	---

Table 7.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
112: Ririe-----	---	---	---	---	---
Cedarhill-----	Common lilac; Rocky Mountain juniper; silver buffaloberry; skunkbush sumac	Austrian pine; black locust; blue spruce; green ash; honeylocust; ponderosa pine	Siberian elm	---	---
113: Ririe-----	---	---	---	---	---
Hondoho-----	Common lilac; Rocky Mountain juniper; silver buffaloberry; skunkbush sumac	Austrian pine; black locust; blue spruce; green ash; honeylocust; ponderosa pine	Siberian elm	---	---
119: Samaria-----	Common lilac; Nanking cherry; Tatarian honeysuckle	Rocky Mountain juniper	Norway spruce; Scotch pine	Golden willow; honeylocust; Russian olive	---
120: Samaria-----	Common lilac; Nanking cherry; Tatarian honeysuckle	Rocky Mountain juniper	Norway spruce; Scotch pine	Golden willow; honeylocust; Russian olive	---
121: Samaria-----	Common lilac; Nanking cherry; Tatarian honeysuckle	Rocky Mountain juniper	Norway spruce; Scotch pine	Golden willow; honeylocust; Russian olive	---
Pollynot-----	Common lilac; Nanking cherry	---	Blue spruce; Scotch pine	Golden willow; Russian olive	---
122: Samaria-----	Common lilac; Nanking cherry; Tatarian honeysuckle	Rocky Mountain juniper	Norway spruce; Scotch pine	Golden willow; honeylocust; Russian olive	---
Sterling-----	---	---	---	---	---

Table 7.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	>35
128: Tickason-----	Common lilac	American plum	---	Black locust; blue spruce; green ash	Golden willow; Lombardy poplar; plains cottonwood; Scotch pine; Siberian elm
130: Toefoot-----	Nanking cherry; Tatarian honeysuckle	Rocky Mountain juniper	Norway spruce; Scotch pine	Golden willow; honeylocust; Russian olive	---

Table 8a.--Recreational Development (Part 1)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1: Araveton-----	50	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Hades-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope Gravel content	1.00 0.06
2: Arbone-----	75	Not limited		Not limited		Somewhat limited Gravel content	0.22
3: Arbone-----	90	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope Gravel content	1.00 0.22
4: Arbone-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.22
5: Arbone-----	35	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope Gravel content	1.00 0.22
Hondoho-----	30	Somewhat limited Gravel content Slope	0.09 0.01	Somewhat limited Gravel content Slope	0.09 0.01	Very limited Gravel content Slope Large stones content	1.00 1.00 0.03
Cedarhill-----	20	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope Gravel content Large stones content	1.00 0.94 0.08
6: Arbone-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.94
Hondoho-----	25	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content Large stones content	1.00 1.00 0.03
Cedarhill-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Large stones content	1.00 0.94 0.08

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7: Bayhook-----	90	Very limited Sodium content Dusty Slow water movement Salinity	 1.00 0.50 0.21 0.13	Very limited Sodium content Dusty Slow water movement Salinity	 1.00 0.50 0.21 0.13	Very limited Sodium content Dusty Slow water movement Salinity	 1.00 0.50 0.21 0.13
8: Bayhook-----	55	Very limited Sodium content Dusty Slow water movement Salinity	 1.00 0.50 0.21 0.13	Very limited Sodium content Dusty Slow water movement Salinity	 1.00 0.50 0.21 0.13	Very limited Sodium content Dusty Slow water movement Salinity	 1.00 0.50 0.21 0.13
Ecur-----	35	Very limited Sodium content	 1.00	Very limited Sodium content	 1.00	Very limited Sodium content	 1.00
9: Bingham-----	90	Somewhat limited Gravel content	 0.02	Somewhat limited Gravel content	 0.02	Very limited Gravel content Slope	 1.00 0.12
10: Bingham-----	45	Somewhat limited Gravel content	 0.02	Somewhat limited Gravel content	 0.02	Very limited Gravel content	 1.00
Tirod-----	35	Not limited		Not limited		Not limited	
11: Bloor-----	50	Very limited Sodium content Salinity Slow water movement Dusty	 1.00 1.00 0.96 0.50	Very limited Sodium content Salinity Slow water movement Dusty	 1.00 1.00 0.96 0.50	Very limited Sodium content Salinity Slow water movement Dusty	 1.00 1.00 0.96 0.50
Brinnum-----	35	Very limited Depth to saturated zone Sodium content Flooding Slow water movement Salinity	 1.00 1.00 1.00 0.21 0.13	Very limited Sodium content Depth to saturated zone Slow water movement Salinity	 1.00 0.99 0.21 0.13	Very limited Depth to saturated zone Sodium content Flooding Slow water movement Salinity	 1.00 1.00 0.60 0.21 0.13
12: Bothwell-----	80	Not limited		Not limited		Not limited	
13: Bothwell-----	35	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope	 1.00
Hades-----	30	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Gravel content	 1.00 0.06
Justesen-----	20	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Gravel content	 1.00 0.78

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
14: Brinnum-----	30	Very limited Depth to saturated zone Sodium content Flooding Slow water movement Salinity	1.00 1.00 1.00 0.21 0.13	Very limited Sodium content Depth to saturated zone Slow water movement Salinity	1.00 0.99 0.21 0.13	Very limited Depth to saturated zone Sodium content Flooding Slow water movement Salinity	1.00 1.00 0.60 0.21 0.13
Logan-----	30	Very limited Depth to saturated zone Flooding Slow water movement	1.00 1.00 0.21	Very limited Sodium content Depth to saturated zone Slow water movement	1.00 0.21	Very limited Depth to saturated zone Slow water movement	1.00 0.21
Langless-----	25	Very limited Depth to saturated zone Flooding Sodium content	1.00 1.00 1.00	Very limited Sodium content Depth to saturated zone Flooding	1.00 0.94 0.40	Very limited Depth to saturated zone Flooding Sodium content	1.00 1.00 1.00
15: Buckboard-----	80	Not limited		Not limited		Not limited	
16: Buist-----	75	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content Large stones content	1.00 1.00 0.08
17: Calpac-----	30	Very limited Slope Gravel content	1.00 0.25	Very limited Slope Gravel content	1.00 0.25	Very limited Slope Gravel content	1.00 1.00
Ridgecrest-----	30	Very limited Slope Gravel content	1.00 0.68	Very limited Slope Gravel content	1.00 0.68	Very limited Gravel content Slope Large stones content Depth to bedrock	1.00 1.00 0.68 0.10
Ireland-----	25	Very limited Slope Gravel content	1.00 0.84	Very limited Slope Gravel content	1.00 0.84	Very limited Gravel content Slope Depth to bedrock Large stones content	1.00 1.00 0.65 0.54
18: Cedarhill-----	85	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope Gravel content Large stones content	1.00 0.94 0.08

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
19: Cedarhill-----	75	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Large stones content	1.00 0.94 0.08
20: Cedarhill-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Large stones content	1.00 0.94 0.08
Hymas-----	30	Very limited Slope Depth to bedrock Large stones content Gravel content	1.00 1.00 0.32 0.09	Very limited Slope Depth to bedrock Large stones content Gravel content	1.00 1.00 0.32 0.09	Very limited Slope Depth to bedrock Large stones content Gravel content	1.00 1.00 1.00 1.00
21: Cedarhill-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Large stones content	1.00 0.94 0.08
Lostine-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
22: Collinston-----	85	Not limited		Not limited		Not limited	
23: Collinston-----	45	Not limited		Not limited		Very limited Slope	1.00
Kearns-----	30	Not limited		Not limited		Very limited Slope	1.00
24: Copenhagen-----	35	Very limited Depth to bedrock Gravel content Slope	1.00 1.00 1.00	Very limited Depth to bedrock Gravel content Slope	1.00 1.00 1.00	Very limited Gravel content Slope Depth to bedrock Large stones content	1.00 1.00 1.00 0.11
Lonigan-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Gravel content	1.00 0.20 0.18
Manila-----	20	Very limited Slope Slow water movement	1.00 0.41	Very limited Slope Slow water movement	1.00 0.41	Very limited Slope Slow water movement	1.00 0.41

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
25: Darkbull-----	40	Very limited Slope Sodium content Dusty Gravel content	 1.00 1.00 0.50 0.08	Very limited Slope Sodium content Dusty Gravel content	 1.00 1.00 0.50 0.08	Very limited Gravel content Slope Sodium content Dusty	 1.00 1.00 1.00 0.50
Pyrat-----	30	Very limited Slope Dusty Gravel content	 1.00 0.50 0.20	Very limited Slope Dusty Gravel content	 1.00 0.50 0.20	Very limited Gravel content Slope Dusty	 1.00 1.00 0.50
Ecur-----	25	Very limited Sodium content Slope	 1.00 1.00	Very limited Sodium content Slope	 1.00 1.00	Very limited Sodium content Slope	 1.00 1.00
26: DeJarnet-----	90	Somewhat limited Gravel content	 0.18	Somewhat limited Gravel content	 0.18	Very limited Gravel content	 1.00
27: Dumps, mine-----	100	Not rated		Not rated		Not rated	
28: Ecur-----	85	Very limited Sodium content	 1.00	Very limited Sodium content	 1.00	Very limited Sodium content	 1.00
29: Ecur-----	45	Very limited Sodium content	 1.00	Very limited Sodium content	 1.00	Very limited Sodium content Slope	 1.00 0.88
Darkbull-----	30	Very limited Sodium content Dusty Gravel content	 1.00 0.50 0.08	Very limited Sodium content Dusty Gravel content	 1.00 0.50 0.08	Very limited Gravel content Sodium content Slope Dusty	 1.00 1.00 0.88 0.50
30: Elevator-----	80	Somewhat limited Slow water movement	 0.41	Somewhat limited Slow water movement	 0.41	Somewhat limited Slow water movement	 0.41
31: Elevator-----	40	Somewhat limited Slow water movement	 0.41	Somewhat limited Slow water movement	 0.41	Somewhat limited Slow water movement Slope	 0.41 0.12
Jensen-----	35	Not limited		Not limited		Somewhat limited Slope	 0.12
32: Elevator-----	40	Somewhat limited Slow water movement Slope	 0.41 0.01	Somewhat limited Slow water movement Slope	 0.41 0.01	Very limited Slope Slow water movement	 1.00 0.41
Jensen-----	35	Somewhat limited Slope	 0.01	Somewhat limited Slope	 0.01	Very limited Slope	 1.00

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
33: Fridlo-----	75	Very limited Sodium content Slow water movement	1.00 0.41	Very limited Sodium content Slow water movement	1.00 0.41	Very limited Sodium content Slow water movement	1.00 0.41
34: Goosenawt-----	75	Very limited Flooding Gravel content	1.00 0.08	Somewhat limited Gravel content	0.08	Very limited Gravel content	1.00
35: Hans-----	80	Somewhat limited Dusty Slow water movement	0.50 0.41	Somewhat limited Dusty Slow water movement	0.50 0.41	Somewhat limited Dusty Slow water movement	0.50 0.41
36: Highcreek-----	45	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Sterling-----	30	Somewhat limited Gravel content	0.61	Somewhat limited Gravel content	0.61	Very limited Gravel content	1.00
		Large stones content	0.08	Large stones content	0.08	Slope	1.00
		Slope	0.01	Slope	0.01	Large stones content	1.00
37: Highcreek-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Sterling-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Gravel content	1.00
		Gravel content	0.61	Gravel content	0.61	Slope	1.00
		Large stones content	0.08	Large stones content	0.08	Large stones content	1.00
38: Hillfield-----	50	Very limited Slope Dusty	1.00 0.50	Very limited Slope Dusty	1.00 0.50	Very limited Slope Dusty	1.00 0.50
Kucera-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
39: Hillfield-----	65	Very limited Slope Dusty	1.00 0.50	Very limited Slope Dusty	1.00 0.50	Very limited Slope Dusty	1.00 0.50
Kucera-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
40: Hondoho-----	35	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content Large stones content	1.00 1.00 0.03

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
40: Calpac-----	20	Very limited Slope Gravel content	1.00 0.25	Very limited Slope Gravel content	1.00 0.25	Very limited Slope Gravel content	1.00 1.00
Lizdale-----	20	Very limited Slope Gravel content	1.00 1.00	Very limited Slope Gravel content	1.00 1.00	Very limited Gravel content Slope Large stones content	1.00 1.00 0.08
41: Hondoho-----	35	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content Large stones content	1.00 1.00 0.03
Hymas-----	25	Very limited Depth to bedrock Slope Large stones content Gravel content	1.00 1.00 0.32 0.09	Very limited Depth to bedrock Slope Large stones content Gravel content	1.00 1.00 0.32 0.09	Very limited Slope Depth to bedrock Large stones content Gravel content	1.00 1.00 1.00 1.00
Pavohroo-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
42: Hondoho-----	35	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content Large stones content	1.00 1.00 0.03
Hymas-----	25	Very limited Slope Depth to bedrock Large stones content Gravel content	1.00 1.00 0.32 0.09	Very limited Slope Depth to bedrock Large stones content Gravel content	1.00 1.00 0.32 0.09	Very limited Slope Depth to bedrock Large stones content Gravel content	1.00 1.00 1.00 1.00
Pavohroo-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
43: Hondoho-----	35	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content Large stones content	1.00 1.00 0.03
Ridgecrest-----	30	Very limited Slope Gravel content	1.00 0.68	Very limited Slope Gravel content	1.00 0.68	Very limited Gravel content Slope Large stones content Depth to bedrock	1.00 1.00 0.68 0.10
Hades-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.06

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
44: Hutchley-----	30	Very limited Depth to bedrock Slope Gravel content	 1.00 1.00 0.01	Very limited Depth to bedrock Slope Gravel content	 1.00 1.00 0.01	Very limited Depth to bedrock Slope Gravel content Large stones content	 1.00 1.00 1.00 0.16
McCarey-----	25	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Depth to bedrock Gravel content Large stones content	 1.00 0.95 0.16 0.01
Araveton-----	25	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope	 1.00
45: Hymas-----	35	Very limited Slope Depth to bedrock Large stones content Gravel content	 1.00 1.00 0.32 0.09	Very limited Slope Depth to bedrock Large stones content Gravel content	 1.00 1.00 0.32 0.09	Very limited Slope Depth to bedrock Large stones content Gravel content	 1.00 1.00 1.00 1.00
Calpac-----	25	Very limited Slope Gravel content	 1.00 0.25	Very limited Slope Gravel content	 1.00 0.25	Very limited Slope Gravel content	 1.00 1.00
Ireland-----	20	Very limited Slope Gravel content	 1.00 0.84	Very limited Slope Gravel content	 1.00 0.84	Very limited Gravel content Slope Depth to bedrock Large stones content	 1.00 1.00 0.65 0.54
46: Hymas-----	30	Very limited Slope Depth to bedrock Large stones content Gravel content	 1.00 1.00 0.32 0.09	Very limited Slope Depth to bedrock Large stones content Gravel content	 1.00 1.00 0.32 0.09	Very limited Slope Depth to bedrock Large stones content Gravel content	 1.00 1.00 1.00 1.00
Northwater-----	30	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope	 1.00
Clayburn-----	20	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Gravel content	 1.00 0.68
47: Hymas-----	45	Very limited Slope Depth to bedrock Large stones content Gravel content	 1.00 1.00 0.32 0.09	Very limited Slope Depth to bedrock Large stones content Gravel content	 1.00 1.00 0.32 0.09	Very limited Slope Depth to bedrock Large stones content Gravel content	 1.00 1.00 1.00 1.00

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
47: Povey-----	30	Very limited Slope Gravel content	1.00 0.49	Very limited Slope Gravel content	1.00 0.49	Very limited Gravel content Slope Large stones content	1.00 1.00 0.11
48: Hymas-----	35	Very limited Slope Depth to bedrock Large stones content Gravel content	1.00 1.00 0.32 0.09	Very limited Slope Depth to bedrock Large stones content Gravel content	1.00 1.00 0.32 0.09	Very limited Slope Depth to bedrock Large stones content Gravel content	1.00 1.00 1.00 1.00
Povey-----	25	Very limited Slope Gravel content	1.00 0.49	Very limited Slope Gravel content	1.00 0.49	Very limited Gravel content Slope Large stones content	1.00 1.00 0.11
Pavohroo-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
49: Inkom-----	85	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 1.00
50: Iphil-----	50	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Very limited Slope	1.00
Ririe-----	20	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Very limited Slope	1.00
Watercanyon-----	15	Somewhat limited Dusty Slope	0.50 0.16	Somewhat limited Dusty Slope	0.50 0.16	Very limited Slope Dusty	1.00 0.50
51: Ireland-----	40	Very limited Slope Gravel content	1.00 0.84	Very limited Slope Gravel content	1.00 0.84	Very limited Gravel content Slope Depth to bedrock Large stones content	1.00 1.00 0.65 0.54
Calpac-----	35	Very limited Slope Gravel content	1.00 0.25	Very limited Slope Gravel content	1.00 0.25	Very limited Slope Gravel content	1.00 1.00
52: Jensen-----	80	Not limited		Not limited		Not limited	
53: Jensen-----	80	Not limited		Not limited		Somewhat limited Slope	0.50

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
54: Jensen-----	30	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Iphil-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Wursten-----	25	Somewhat limited Gravel content Slope	0.11 0.01	Somewhat limited Gravel content Slope	0.11 0.01	Very limited Gravel content Slope Large stones content	1.00 1.00 0.01
55: Jovine-----	80	Very limited Flooding	1.00	Not limited		Not limited	
56: Justesen-----	75	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope Gravel content	1.00 0.78
57: Justesen-----	75	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.78
58: Justesen-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.78
Ririe-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Buist-----	15	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content Large stones content	1.00 1.00 0.08
59: Kearns-----	80	Not limited		Not limited		Not limited	
60: Kearns-----	75	Not limited		Not limited		Somewhat limited Slope	0.12
61: Kidman-----	90	Not limited		Not limited		Somewhat limited Slope	0.12
62: Kidman-----	60	Not limited		Not limited		Somewhat limited Slope	0.50
Preston-----	25	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 1.00

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
63: Kucera-----	85	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
64: Lagonot-----	90	Very limited Flooding	1.00	Not limited		Not limited	
65: Langless-----	85	Very limited Depth to saturated zone Flooding Sodium content	1.00 1.00 1.00	Very limited Sodium content Depth to saturated zone Flooding	1.00 0.94 0.40	Very limited Depth to saturated zone Flooding Sodium content	1.00 1.00 1.00
66: Langless-----	55	Very limited Depth to saturated zone Flooding Sodium content	1.00 1.00 1.00	Very limited Sodium content Depth to saturated zone Flooding	1.00 0.94 0.40	Very limited Depth to saturated zone Flooding Sodium content	1.00 1.00 1.00
Logan-----	30	Very limited Depth to saturated zone Flooding Slow water movement	1.00 1.00 0.21	Very limited Depth to saturated zone Slow water movement	1.00 0.21	Very limited Depth to saturated zone Slow water movement	1.00 0.21
67: Lanoak-----	90	Not limited		Not limited		Not limited	
68: Lanoak-----	90	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
69: Lanoak-----	45	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Very limited Slope	1.00
Hondoho-----	35	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content Large stones content	1.00 1.00 0.03
70: Logan-----	95	Very limited Depth to saturated zone Flooding Slow water movement	1.00 1.00 0.21	Very limited Depth to saturated zone Slow water movement	1.00 0.21	Very limited Depth to saturated zone Slow water movement	1.00 0.21
71: Lonigan-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Gravel content	1.00 0.20 0.18

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
71: Lizdale-----	35	Very limited Gravel content Slope	1.00 1.00	Very limited Gravel content Slope	1.00 1.00	Very limited Gravel content Slope Large stones content	1.00 1.00 0.08
72: Lostine-----	75	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
73: Manila-----	85	Somewhat limited Slow water movement Slope	0.41 0.01	Somewhat limited Slow water movement Slope	0.41 0.01	Very limited Slope Slow water movement	1.00 0.41
74: Manila-----	45	Somewhat limited Slow water movement Slope	0.41 0.01	Somewhat limited Slow water movement Slope	0.41 0.01	Very limited Slope Slow water movement	1.00 0.41
Broadhead-----	30	Somewhat limited Slow water movement Slope	0.45 0.01	Somewhat limited Slow water movement Slope	0.45 0.01	Very limited Slope Slow water movement	1.00 0.45
75: Manila-----	45	Very limited Slope Slow water movement	1.00 0.41	Very limited Slope Slow water movement	1.00 0.41	Very limited Slope Slow water movement	1.00 0.41
Broadhead-----	30	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45	Very limited Slope Slow water movement	1.00 0.45
76: Manila-----	50	Very limited Slope Slow water movement	1.00 0.41	Very limited Slope Slow water movement	1.00 0.41	Very limited Slope Slow water movement	1.00 0.41
Lonigan-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Gravel content	1.00 0.20 0.18
77: Manila-----	50	Somewhat limited Slow water movement Slope	0.41 0.01	Somewhat limited Slow water movement Slope	0.41 0.01	Very limited Slope Slow water movement	1.00 0.41
Obnot-----	25	Somewhat limited Slow water movement Large stones content Slope	0.45 0.08 0.01	Somewhat limited Slow water movement Large stones content Slope	0.45 0.08 0.01	Very limited Large stones content Slope Slow water movement	1.00 1.00 0.45

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
78: Manila-----	45	Somewhat limited Slow water movement Slope	0.41 0.01	Somewhat limited Slow water movement Slope	0.41 0.01	Very limited Slope Slow water movement	1.00 0.41
Yago-----	40	Somewhat limited Slow water movement Large stones content Slope	0.41 0.18 0.01	Somewhat limited Slow water movement Large stones content Slope	0.41 0.18 0.01	Very limited Large stones content Slope Gravel content Slow water movement	1.00 1.00 0.56 0.41
79: Manila-----	45	Very limited Slope Slow water movement	1.00 0.41	Very limited Slope Slow water movement	1.00 0.41	Very limited Slope Slow water movement	1.00 0.41
Yago-----	35	Very limited Slope Slow water movement Large stones content	1.00 0.41 0.18	Very limited Slope Slow water movement Large stones content	1.00 0.41 0.18	Very limited Slope Large stones content Gravel content Slow water movement	1.00 1.00 0.56 0.41
80: Mellor-----	50	Very limited Sodium content Dusty Slow water movement Salinity	1.00 0.50 0.41 0.13	Very limited Sodium content Dusty Slow water movement Salinity	1.00 0.50 0.41 0.13	Very limited Sodium content Dusty Slow water movement Salinity	1.00 0.50 0.41 0.13
Freedom-----	35	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50
81: Neeley-----	90	Very limited Sodium content	1.00	Very limited Sodium content	1.00	Very limited Sodium content	1.00
82: Northwater-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Povey-----	30	Very limited Slope Gravel content	1.00 0.49	Very limited Slope Gravel content	1.00 0.49	Very limited Gravel content Slope Large stones content	1.00 1.00 0.11
Pavohroo-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
83: Parehat-----	90	Very limited Sodium content Flooding	1.00 1.00	Very limited Sodium content	1.00	Very limited Sodium content Flooding	1.00 0.60

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
84: Parleys-----	80	Not limited		Not limited		Not limited	
85: Parleys-----	85	Not limited		Not limited		Somewhat limited Slope	0.12
86: Parleys-----	50	Not limited		Not limited		Very limited Slope	1.00
Welby-----	35	Very limited Sodium content	1.00	Very limited Sodium content	1.00	Very limited Slope	1.00
87: Parleys-----	60	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Wheelon-----	15	Very limited Sodium content Dusty Slope	1.00 0.50 0.01	Very limited Sodium content Dusty Slope	1.00 0.50 0.01	Very limited Slope Sodium content Dusty	1.00 1.00 0.50
88: Pavohroo-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Povey-----	30	Very limited Slope Gravel content	1.00 0.49	Very limited Slope Gravel content	1.00 0.49	Very limited Gravel content Slope Large stones content	1.00 1.00 0.11
89: Pavohroo-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Stines-----	30	Very limited Slope Gravel content	1.00 0.24	Very limited Slope Gravel content	1.00 0.24	Very limited Gravel content Slope Large stones content	1.00 1.00 0.08
Lonigan-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Depth to bedrock Gravel content	1.00 0.20 0.18
90: Pits, gravel-----	100	Not rated		Not rated		Not rated	
91: Povey-----	35	Very limited Slope Gravel content	1.00 0.49	Very limited Slope Gravel content	1.00 0.49	Very limited Gravel content Slope Large stones content	1.00 1.00 0.11
Hades-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.06

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
91: Hondoho-----	25	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content Large stones content	1.00 1.00 0.03
92: Povey-----	45	Very limited Slope Gravel content	1.00 0.49	Very limited Slope Gravel content	1.00 0.49	Very limited Gravel content Slope Large stones content	1.00 1.00 0.11
Ireland-----	25	Very limited Slope Gravel content	1.00 0.84	Very limited Slope Gravel content	1.00 0.84	Very limited Gravel content Slope Depth to bedrock Large stones content	1.00 1.00 0.65 0.54
Calpac-----	15	Very limited Slope Gravel content	1.00 0.25	Very limited Slope Gravel content	1.00 0.25	Very limited Slope Gravel content	1.00 1.00
93: Povey-----	45	Very limited Slope Gravel content	1.00 0.49	Very limited Slope Gravel content	1.00 0.49	Very limited Gravel content Slope Large stones content	1.00 1.00 0.11
Pavohroo-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
94: Povirt-----	85	Very limited Depth to saturated zone Flooding Slow water movement Sodium content Ponding	1.00 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Slow water movement Sodium content Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Slow water movement Sodium content Ponding	1.00 1.00 1.00 1.00
95: Raldridge-----	75	Somewhat limited Gravel content Slope	0.08 0.01	Somewhat limited Gravel content Slope	0.08 0.01	Very limited Gravel content Slope	1.00 1.00
96: Rexburg-----	85	Not limited		Not limited		Somewhat limited Slope	0.12
97: Rexburg-----	50	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Arbone-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope Gravel content	1.00 0.22

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
97: Ririe-----	15	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
98: Rexburg-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Arbone-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.22
Ririe-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
99: Rexburg-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Iphil-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Watercanyon-----	25	Very limited Slope Dusty	1.00 0.50	Very limited Slope Dusty	1.00 0.50	Very limited Slope Dusty	1.00 0.50
100: Rexburg-----	55	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Lanoak-----	35	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
101: Rexburg-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Lanoak-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
102: Rexburg-----	35	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Lanoak-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Watercanyon-----	20	Somewhat limited Dusty Slope	0.50 0.01	Somewhat limited Dusty Slope	0.50 0.01	Very limited Slope Dusty	1.00 0.50
103: Rexburg-----	50	Not limited		Not limited		Somewhat limited Slope	0.88
Ririe-----	20	Not limited		Not limited		Somewhat limited Slope	0.88
Kucera-----	15	Not limited		Not limited		Somewhat limited Slope	0.88

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
104:							
Rexburg-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Thatcher-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Ririe-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
105:							
Rexburg-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Watercanyon-----	30	Very limited Slope Dusty	1.00 0.50	Very limited Slope Dusty	1.00 0.50	Very limited Slope Dusty	1.00 0.50
Lanoak-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
106:							
Ridgecrest-----	45	Very limited Slope Gravel content	1.00 0.68	Very limited Slope Gravel content	1.00 0.68	Very limited Gravel content Slope Large stones content Depth to bedrock	1.00 1.00 0.68 0.10
Hondoho-----	35	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content Large stones content	1.00 1.00 0.03
107:							
Ridgecrest-----	35	Very limited Slope Gravel content	1.00 0.68	Very limited Slope Gravel content	1.00 0.68	Very limited Gravel content Slope Large stones content Depth to bedrock	1.00 1.00 0.68 0.10
Hondoho-----	30	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content Large stones content	1.00 1.00 0.03
Hymas-----	15	Very limited Slope Depth to bedrock Large stones content Gravel content	1.00 1.00 0.32 0.09	Very limited Slope Depth to bedrock Large stones content Gravel content	1.00 1.00 0.32 0.09	Very limited Slope Depth to bedrock Large stones content Gravel content	1.00 1.00 1.00 1.00

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
108: Ridgecrest-----	35	Very limited Slope Gravel content	1.00 0.68	Very limited Slope Gravel content	1.00 0.68	Very limited Gravel content Slope Large stones content Depth to bedrock	1.00 1.00 0.68 0.10
Hondoho-----	30	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content Large stones content	1.00 1.00 0.03
Lizdale-----	20	Very limited Slope Gravel content	1.00 1.00	Very limited Slope Gravel content	1.00 1.00	Very limited Gravel content Slope Large stones content	1.00 1.00 0.08
109: Ridgecrest-----	45	Very limited Slope Gravel content	1.00 0.68	Very limited Slope Gravel content	1.00 0.68	Very limited Gravel content Slope Large stones content Depth to bedrock	1.00 1.00 0.68 0.10
Hymas-----	30	Very limited Slope Depth to bedrock Large stones content Gravel content	1.00 1.00 0.32 0.09	Very limited Slope Depth to bedrock Large stones content Gravel content	1.00 1.00 0.32 0.09	Very limited Slope Depth to bedrock Large stones content Gravel content	1.00 1.00 1.00 1.00
110: Ririe-----	50	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Buist-----	25	Somewhat limited Gravel content Slope	0.01 0.01	Somewhat limited Gravel content Slope	0.01 0.01	Very limited Slope Gravel content Large stones content	1.00 1.00 0.08
111: Ririe-----	50	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Cedarhill-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope Gravel content Large stones content	1.00 0.94 0.08
112: Ririe-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
112: Cedarhill-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Large stones content	1.00 0.94 0.08
113: Ririe-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Hondoho-----	25	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content	1.00 0.09	Very limited Slope Gravel content Large stones content	1.00 1.00 0.03
114: Ririe-----	40	Not limited		Not limited		Somewhat limited Slope	0.88
Iphil-----	25	Not limited		Not limited		Somewhat limited Slope	0.88
Kucera-----	20	Not limited		Not limited		Somewhat limited Slope	0.88
115: Ririe-----	30	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Iphil-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Rexburg-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
116: Ririe-----	45	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Rexburg-----	40	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
117: Ririe-----	50	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Watercanyon-----	25	Somewhat limited Dusty Slope	0.50 0.01	Somewhat limited Dusty Slope	0.50 0.01	Very limited Slope Dusty	1.00 0.50
118: Ririe-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Watercanyon-----	35	Very limited Slope Dusty	1.00 0.50	Very limited Slope Dusty	1.00 0.50	Very limited Slope Dusty	1.00 0.50

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
119: Samaria-----	90	Not limited		Not limited		Not limited	
120: Samaria-----	90	Not limited		Not limited		Very limited Slope	1.00
121: Samaria-----	55	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Pollynot-----	30	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
122: Samaria-----	50	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Sterling-----	35	Somewhat limited Gravel content Large stones content Slope	0.61 0.08 0.01	Somewhat limited Gravel content Large stones content Slope	0.61 0.08 0.01	Very limited Gravel content Slope Large stones content	1.00 1.00 1.00
123: Sterling-----	80	Very limited Slope Gravel content Large stones content	1.00 0.61 0.08	Very limited Slope Gravel content Large stones content	1.00 0.61 0.08	Very limited Gravel content Slope Large stones content	1.00 1.00 1.00
124: Thatcher-----	85	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
125: Thatcher-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Jensen-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
126: Freedom-----	75	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50
127: Tickason-----	80	Not limited		Not limited		Not limited	
128: Tickason-----	85	Not limited		Not limited		Somewhat limited Slope	0.12
129: Tirod-----	85	Not limited		Not limited		Not limited	
130: Toefoot-----	90	Not limited		Not limited		Not limited	

Table 8a.--Recreational Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
131: Welby-----	65	Very limited Sodium content	1.00	Very limited Sodium content	1.00	Very limited Sodium content	1.00
Parleys-----	20	Not limited		Not limited		Not limited	
132: Wursten-----	85	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Gravel content	1.00
		Gravel content	0.11	Gravel content	0.11	Slope	1.00
						Large stones content	0.01
133: Yago-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Slow water movement	0.41	Slow water movement	0.41	Large stones content	1.00
		Large stones content	0.18	Large stones content	0.18	Gravel content	0.56
						Slow water movement	0.41
Manila-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Slow water movement	0.41	Slow water movement	0.41	Slow water movement	0.41
134: Water-----	100	Not rated		Not rated		Not rated	

Table 8b.--Recreational Development (Part 2)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1: Araveton-----	50	Not limited		Not limited		Somewhat limited Slope	0.01
Hades-----	25	Not limited		Not limited		Somewhat limited Slope	0.01
2: Arbone-----	75	Not limited		Not limited		Not limited	
3: Arbone-----	90	Not limited		Not limited		Somewhat limited Slope	0.01
4: Arbone-----	85	Very limited Water erosion Slope	1.00 0.02	Very limited Water erosion	1.00	Very limited Slope	1.00
5: Arbone-----	35	Not limited		Not limited		Somewhat limited Slope	0.01
Hondoho-----	30	Not limited		Not limited		Somewhat limited Gravel content Large stones content Slope	0.09 0.03 0.01
Cedarhill-----	20	Not limited		Not limited		Somewhat limited Large stones content Droughty Slope	0.08 0.01 0.01
6: Arbone-----	45	Somewhat limited Slope	0.68	Not limited		Very limited Slope	1.00
Hondoho-----	25	Somewhat limited Slope	0.68	Not limited		Very limited Slope Gravel content Large stones content	1.00 0.09 0.03
Cedarhill-----	20	Somewhat limited Slope	0.68	Not limited		Very limited Slope Large stones content Droughty	1.00 0.08 0.01
7: Bayhook-----	90	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Very limited Sodium content Salinity	1.00 0.13

Table 8b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
8: Bayhook-----	55	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Very limited Sodium content Salinity	1.00 0.13
Ecur-----	35	Not limited		Not limited		Very limited Sodium content	1.00
9: Bingham-----	90	Not limited		Not limited		Somewhat limited Gravel content Droughty	0.02 0.01
10: Bingham-----	45	Not limited		Not limited		Somewhat limited Gravel content Droughty	0.02 0.01
Tirod-----	35	Not limited		Not limited		Not limited	
11: Bloor-----	50	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Very limited Salinity Sodium content	1.00 1.00
Brinnum-----	35	Somewhat limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.99	Very limited Sodium content Depth to saturated zone Flooding Salinity Droughty	1.00 0.99 0.60 0.13 0.01
12: Bothwell-----	80	Not limited		Not limited		Not limited	
13: Bothwell-----	35	Very limited Water erosion Slope	1.00 0.02	Very limited Water erosion	1.00	Very limited Slope	1.00
Hades-----	30	Somewhat limited Slope	0.02	Not limited		Very limited Slope	1.00
Justesen-----	20	Very limited Water erosion Slope	1.00 0.02	Very limited Water erosion	1.00	Very limited Slope	1.00
14: Brinnum-----	30	Somewhat limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.99	Very limited Sodium content Depth to saturated zone Flooding Salinity Droughty	1.00 0.99 0.60 0.13 0.01
Logan-----	30	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 8b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
14: Langless-----	25	Somewhat limited Depth to saturated zone Flooding	0.86 0.40	Somewhat limited Depth to saturated zone Flooding	0.86 0.40	Very limited Flooding Sodium content Carbonate content Depth to saturated zone	1.00 1.00 1.00 0.94
15: Buckboard-----	80	Not limited		Not limited		Not limited	
16: Buist-----	75	Very limited Slope	1.00	Not limited		Very limited Slope Large stones content Gravel content	1.00 0.08 0.01
17: Calpac-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.25 0.05
Ridgecrest-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Carbonate content Gravel content Large stones content Depth to bedrock	1.00 1.00 0.68 0.68 0.10
Ireland-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Gravel content Depth to bedrock Large stones content	1.00 0.99 0.84 0.65 0.54
18: Cedarhill-----	85	Not limited		Not limited		Somewhat limited Large stones content Droughty Slope	0.08 0.01 0.01
19: Cedarhill-----	75	Somewhat limited Slope	0.68	Not limited		Very limited Slope Large stones content Droughty	1.00 0.08 0.01
20: Cedarhill-----	45	Very limited Slope	1.00	Somewhat limited Slope	0.96	Very limited Slope Large stones content Droughty	1.00 0.08 0.01

Table 8b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20: Hymas-----	30	Very limited Slope Large stones content	1.00 0.32	Somewhat limited Slope Large stones content	0.96 0.32	Very limited Depth to bedrock Slope Droughty Large stones content Carbonate content	1.00 1.00 1.00 1.00 1.00
21: Cedarhill-----	40	Somewhat limited Slope	0.68	Not limited		Very limited Slope Large stones content Droughty	1.00 0.08 0.01
Lostine-----	40	Very limited Water erosion Slope	1.00 0.68	Very limited Water erosion	1.00	Very limited Slope	1.00
22: Collinston-----	85	Not limited		Not limited		Not limited	
23: Collinston-----	45	Not limited		Not limited		Not limited	
Kearns-----	30	Not limited		Not limited		Not limited	
24: Copenhagen-----	35	Very limited Slope	1.00	Somewhat limited Slope	0.32	Very limited Depth to bedrock Droughty Gravel content Slope Large stones content	1.00 1.00 1.00 1.00 0.11
Lonigan-----	30	Very limited Slope	1.00	Somewhat limited Slope	0.32	Very limited Slope Depth to bedrock	1.00 0.20
Manila-----	20	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.32	Very limited Slope	1.00
25: Darkbull-----	40	Somewhat limited Dusty Slope	0.50 0.02	Somewhat limited Dusty	0.50	Very limited Slope Sodium content Gravel content	1.00 1.00 0.08
Pyrat-----	30	Somewhat limited Dusty Slope	0.50 0.02	Somewhat limited Dusty	0.50	Very limited Slope Gravel content	1.00 0.20
Ecur-----	25	Somewhat limited Slope	0.02	Not limited		Very limited Sodium content Slope	1.00 1.00

Table 8b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
26: DeJarnet-----	90	Not limited		Not limited		Somewhat limited Gravel content	0.18
27: Dumps, mine-----	100	Not rated		Not rated		Not rated	
28: Ecur-----	85	Not limited		Not limited		Very limited Sodium content	1.00
29: Ecur-----	45	Not limited		Not limited		Very limited Sodium content	1.00
Darkbull-----	30	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Very limited Sodium content Gravel content	1.00 0.08
30: Elevator-----	80	Not limited		Not limited		Not limited	
31: Elevator-----	40	Not limited		Not limited		Not limited	
Jensen-----	35	Not limited		Not limited		Not limited	
32: Elevator-----	40	Not limited		Not limited		Somewhat limited Slope	0.01
Jensen-----	35	Not limited		Not limited		Somewhat limited Slope	0.01
33: Fridlo-----	75	Not limited		Not limited		Very limited Sodium content	1.00
34: Goosenawt-----	75	Not limited		Not limited		Somewhat limited Gravel content	0.08
35: Hans-----	80	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Not limited	
36: Highcreek-----	45	Not limited		Not limited		Somewhat limited Slope	0.01
Sterling-----	30	Somewhat limited Large stones content	0.08	Somewhat limited Large stones content	0.08	Very limited Large stones content Gravel content Droughty Slope	1.00 0.61 0.16 0.01
37: Highcreek-----	40	Very limited Water erosion Slope	1.00 0.32	Very limited Water erosion	1.00	Very limited Slope	1.00

Table 8b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
37: Sterling-----	35	Somewhat limited Slope Large stones content	0.32 0.08	Somewhat limited Large stones content	0.08	Very limited Slope Large stones content Gravel content Droughty	1.00 1.00 0.61 0.16
38: Hillfield-----	50	Very limited Water erosion Slope Dusty	1.00 0.68 0.50	Very limited Water erosion Dusty	1.00 0.50	Very limited Slope	1.00
Kucera-----	30	Very limited Water erosion Slope	1.00 0.08	Very limited Water erosion	1.00	Very limited Slope	1.00
39: Hillfield-----	65	Very limited Slope Water erosion Dusty	1.00 1.00 0.50	Very limited Water erosion Slope Dusty	1.00 1.00 0.50	Very limited Slope	1.00
Kucera-----	20	Very limited Slope Water erosion	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Slope	1.00
40: Hondoho-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Large stones content	1.00 0.09 0.03
Calpac-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.25 0.05
Lizdale-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Carbonate content Droughty Large stones content	1.00 1.00 1.00 0.39 0.08
41: Hondoho-----	35	Somewhat limited Slope	0.68	Not limited		Very limited Slope Gravel content Large stones content	1.00 0.09 0.03
Hymas-----	25	Somewhat limited Slope Large stones content	0.68 0.32	Somewhat limited Large stones content	0.32	Very limited Depth to bedrock Droughty Large stones content Slope Carbonate content	1.00 1.00 1.00 1.00 1.00

Table 8b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
41: Pavohroo-----	20	Somewhat limited Slope	0.68	Not limited		Very limited Slope	1.00
42: Hondoho-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Large stones content	1.00 0.09 0.03
Hymas-----	25	Very limited Slope Large stones content	1.00 0.32	Very limited Slope Large stones content	1.00 0.32	Very limited Depth to bedrock Slope Droughty Large stones content Carbonate content	1.00 1.00 1.00 1.00 1.00
Pavohroo-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
43: Hondoho-----	35	Very limited Slope	1.00	Somewhat limited Slope	0.32	Very limited Slope Gravel content Large stones content	1.00 0.09 0.03
Ridgecrest-----	30	Very limited Slope	1.00	Somewhat limited Slope	0.32	Very limited Slope Carbonate content Gravel content Large stones content Depth to bedrock	1.00 1.00 0.68 0.68 0.10
Hades-----	20	Very limited Slope	1.00	Somewhat limited Slope	0.32	Very limited Slope	1.00
44: Hutchley-----	30	Somewhat limited Slope	0.82	Not limited		Very limited Depth to bedrock Droughty Slope Large stones content Gravel content	1.00 1.00 1.00 0.16 0.01
McCarey-----	25	Very limited Water erosion Slope	1.00 0.82	Very limited Water erosion	1.00	Very limited Slope Depth to bedrock Large stones content	1.00 0.95 0.01
Araveton-----	25	Very limited Water erosion Slope	1.00 0.82	Very limited Water erosion	1.00	Very limited Slope	1.00

Table 8b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
45: Hymas-----	35	Very limited Slope Large stones content	1.00 0.32	Very limited Slope Large stones content	1.00 0.32	Very limited Depth to bedrock Slope Droughty Large stones content Carbonate content	1.00 1.00 1.00 1.00 1.00
Calpac-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.25 0.05
Ireland-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Gravel content Depth to bedrock Large stones content	1.00 0.99 0.84 0.65 0.54
46: Hymas-----	30	Very limited Slope Large stones content	1.00 0.32	Very limited Slope Large stones content	1.00 0.32	Very limited Depth to bedrock Slope Droughty Large stones content Carbonate content	1.00 1.00 1.00 1.00 1.00
Northwater-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Clayburn-----	20	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 1.00	Very limited Slope	1.00
47: Hymas-----	45	Very limited Slope Large stones content	1.00 0.32	Very limited Slope Large stones content	1.00 0.32	Very limited Depth to bedrock Slope Droughty Large stones content Carbonate content	1.00 1.00 1.00 1.00 1.00
Povey-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Large stones content	1.00 0.49 0.11
48: Hymas-----	35	Very limited Slope Large stones content	1.00 0.32	Very limited Slope Large stones content	1.00 0.32	Very limited Depth to bedrock Slope Droughty Large stones content Carbonate content	1.00 1.00 1.00 1.00 1.00

Table 8b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
48: Povey-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Large stones content	1.00 0.49 0.11
Pavohroo-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
49: Inkom-----	85	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Flooding Depth to saturated zone	1.00 1.00
50: Iphil-----	50	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.96
Ririe-----	20	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.96
Watercanyon-----	15	Very limited Water erosion Dusty	1.00 0.50	Very limited Water erosion Dusty	1.00 0.50	Somewhat limited Slope	0.16
51: Ireland-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Gravel content Depth to bedrock Large stones content	1.00 0.99 0.84 0.65 0.54
Calpac-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.25 0.05
52: Jensen-----	80	Not limited		Not limited		Not limited	
53: Jensen-----	80	Not limited		Not limited		Not limited	
54: Jensen-----	30	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.16
Iphil-----	25	Not limited		Not limited		Somewhat limited Slope	0.01
Wursten-----	25	Not limited		Not limited		Somewhat limited Gravel content Large stones content Slope	0.11 0.01 0.01

Table 8b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
55: Jovine-----	80	Not limited		Not limited		Not limited	
56: Justesen-----	75	Not limited		Not limited		Somewhat limited Slope	0.01
57: Justesen-----	75	Very limited Water erosion Slope	1.00 0.02	Very limited Water erosion	1.00	Very limited Slope	1.00
58: Justesen-----	50	Very limited Water erosion Slope	1.00 0.02	Very limited Water erosion	1.00	Very limited Slope	1.00
Ririe-----	30	Very limited Water erosion Slope	1.00 0.02	Very limited Water erosion	1.00	Very limited Slope	1.00
Buist-----	15	Somewhat limited Slope	0.02	Not limited		Very limited Slope Large stones content Gravel content	1.00 0.08 0.01
59: Kearns-----	80	Not limited		Not limited		Not limited	
60: Kearns-----	75	Not limited		Not limited		Not limited	
61: Kidman-----	90	Not limited		Not limited		Not limited	
62: Kidman-----	60	Not limited		Not limited		Not limited	
Preston-----	25	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Droughty	0.99
63: Kucera-----	85	Not limited		Not limited		Somewhat limited Slope	0.01
64: Lagonot-----	90	Not limited		Not limited		Not limited	
65: Langless-----	85	Somewhat limited Depth to saturated zone Flooding	0.86 0.40	Somewhat limited Depth to saturated zone Flooding	0.86 0.40	Very limited Flooding Sodium content Carbonate content Depth to saturated zone	1.00 1.00 1.00 0.94

Table 8b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
66: Langless-----	55	Somewhat limited Depth to saturated zone Flooding	0.86 0.40	Somewhat limited Depth to saturated zone Flooding	0.86 0.40	Very limited Flooding Sodium content Carbonate content Depth to saturated zone	1.00 1.00 1.00 0.94
Logan-----	30	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
67: Lanoak-----	90	Not limited		Not limited		Not limited	
68: Lanoak-----	90	Very limited Water erosion Slope	1.00 0.68	Very limited Water erosion	1.00	Very limited Slope	1.00
69: Lanoak-----	45	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.84
Hondoho-----	35	Not limited		Not limited		Very limited Slope Gravel content Large stones content	1.00 0.09 0.03
70: Logan-----	95	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
71: Lonigan-----	45	Very limited Slope	1.00	Somewhat limited Slope	0.01	Very limited Slope Depth to bedrock	1.00 0.20
Lizdale-----	35	Somewhat limited Slope	0.18	Not limited		Very limited Gravel content Slope Carbonate content Droughty Large stones content	1.00 1.00 1.00 0.39 0.08
72: Lostine-----	75	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion	1.00	Very limited Slope	1.00
73: Manila-----	85	Not limited		Not limited		Somewhat limited Slope	0.01
74: Manila-----	45	Not limited		Not limited		Somewhat limited Slope	0.01

Table 8b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
74: Broadhead-----	30	Not limited		Not limited		Somewhat limited Slope	0.01
75: Manila-----	45	Very limited Water erosion Slope	1.00 0.68	Very limited Water erosion	1.00	Very limited Slope	1.00
Broadhead-----	30	Somewhat limited Slope	0.68	Not limited		Very limited Slope	1.00
76: Manila-----	50	Very limited Water erosion Slope	1.00 0.92	Very limited Water erosion	1.00	Very limited Slope	1.00
Lonigan-----	30	Somewhat limited Slope	0.92	Not limited		Very limited Slope Depth to bedrock	1.00 0.20
77: Manila-----	50	Not limited		Not limited		Somewhat limited Slope	0.01
Obnot-----	25	Somewhat limited Large stones content	0.08	Somewhat limited Large stones content	0.08	Very limited Large stones content Slope	1.00 0.01
78: Manila-----	45	Not limited		Not limited		Somewhat limited Slope	0.01
Yago-----	40	Somewhat limited Large stones content	0.18	Somewhat limited Large stones content	0.18	Very limited Large stones content Slope	1.00 0.01
79: Manila-----	45	Very limited Water erosion Slope	1.00 0.68	Very limited Water erosion	1.00	Very limited Slope	1.00
Yago-----	35	Somewhat limited Slope Large stones content	0.68 0.18	Somewhat limited Large stones content	0.18	Very limited Large stones content Slope	1.00 1.00
80: Mellor-----	50	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Very limited Sodium content Salinity	1.00 0.13
Freedom-----	35	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Not limited	
81: Neeley-----	90	Not limited		Not limited		Very limited Sodium content	1.00

Table 8b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
82: Northwater-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Povey-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Large stones content	1.00 0.49 0.11
Pavohroo-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
83: Parehat-----	90	Not limited		Not limited		Very limited Sodium content Flooding	1.00 0.60
84: Parleys-----	80	Not limited		Not limited		Not limited	
85: Parleys-----	85	Not limited		Not limited		Not limited	
86: Parleys-----	50	Not limited		Not limited		Not limited	
Welby-----	35	Not limited		Not limited		Very limited Sodium content	1.00
87: Parleys-----	60	Not limited		Not limited		Somewhat limited Slope	0.01
Wheelon-----	15	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Very limited Sodium content Slope	1.00 0.01
88: Pavohroo-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Povey-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Large stones content	1.00 0.49 0.11
89: Pavohroo-----	45	Very limited Slope	1.00	Not limited		Very limited Slope	1.00
Stines-----	30	Very limited Slope	1.00	Not limited		Very limited Slope Gravel content Large stones content Droughty	1.00 0.24 0.08 0.01
Lonigan-----	20	Very limited Slope	1.00	Not limited		Very limited Slope Depth to bedrock	1.00 0.20

Table 8b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
90: Pits, gravel-----	100	Not rated		Not rated		Not rated	
91: Povey-----	35	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope Gravel content Large stones content	1.00 0.49 0.11
Hades-----	30	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope	1.00
Hondoho-----	25	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope Gravel content Large stones content	1.00 0.09 0.03
92: Povey-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Large stones content	1.00 0.49 0.11
Ireland-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Droughty Gravel content Depth to bedrock Large stones content	1.00 0.99 0.84 0.65 0.54
Calpac-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Droughty	1.00 0.25 0.05
93: Povey-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Large stones content	1.00 0.49 0.11
Pavohroo-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
94: Povirt-----	85	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Sodium content Ponding	1.00 1.00 1.00
95: Raldridge-----	75	Not limited		Not limited		Somewhat limited Gravel content Slope	0.08 0.01

Table 8b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
96: Rexburg-----	85	Not limited		Not limited		Not limited	
97: Rexburg-----	50	Not limited		Not limited		Somewhat limited Slope	0.01
Arbone-----	25	Not limited		Not limited		Somewhat limited Slope	0.01
Ririe-----	15	Not limited		Not limited		Somewhat limited Slope	0.01
98: Rexburg-----	40	Very limited Water erosion Slope	1.00 0.32	Very limited Water erosion	1.00	Very limited Slope	1.00
Arbone-----	35	Very limited Water erosion Slope	1.00 0.32	Very limited Water erosion	1.00	Very limited Slope	1.00
Ririe-----	15	Very limited Water erosion Slope	1.00 0.32	Very limited Water erosion	1.00	Very limited Slope	1.00
99: Rexburg-----	30	Very limited Water erosion Slope	1.00 0.68	Very limited Water erosion	1.00	Very limited Slope	1.00
Iphil-----	25	Very limited Water erosion Slope	1.00 0.68	Very limited Water erosion	1.00	Very limited Slope	1.00
Watercanyon-----	25	Very limited Water erosion Slope Dusty	1.00 0.68 0.50	Very limited Water erosion Dusty	1.00 0.50	Very limited Slope	1.00
100: Rexburg-----	55	Not limited		Not limited		Somewhat limited Slope	0.01
Lanoak-----	35	Not limited		Not limited		Somewhat limited Slope	0.01
101: Rexburg-----	55	Very limited Water erosion Slope	1.00 0.32	Very limited Water erosion	1.00	Very limited Slope	1.00
Lanoak-----	35	Very limited Water erosion Slope	1.00 0.32	Very limited Water erosion	1.00	Very limited Slope	1.00
102: Rexburg-----	35	Not limited		Not limited		Somewhat limited Slope	0.01

Table 8b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
102: Lanoak-----	25	Not limited		Not limited		Somewhat limited Slope	0.01
Watercanyon-----	20	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Somewhat limited Slope	0.01
103: Rexburg-----	50	Not limited		Not limited		Not limited	
Ririe-----	20	Not limited		Not limited		Not limited	
Kucera-----	15	Not limited		Not limited		Not limited	
104: Rexburg-----	40	Very limited Water erosion Slope	1.00 0.68	Very limited Water erosion	1.00	Very limited Slope	1.00
Thatcher-----	25	Somewhat limited Slope	0.68	Not limited		Very limited Slope	1.00
Ririe-----	20	Very limited Water erosion Slope	1.00 0.68	Very limited Water erosion	1.00	Very limited Slope	1.00
105: Rexburg-----	35	Very limited Water erosion Slope	1.00 0.02	Very limited Water erosion	1.00	Very limited Slope	1.00
Watercanyon-----	30	Very limited Water erosion Dusty Slope	1.00 0.50 0.02	Very limited Water erosion Dusty	1.00 0.50	Very limited Slope	1.00
Lanoak-----	20	Very limited Water erosion Slope	1.00 0.02	Very limited Water erosion	1.00	Very limited Slope	1.00
106: Ridgecrest-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Carbonate content Gravel content Large stones content Depth to bedrock	1.00 1.00 0.68 0.68 0.10
Hondoho-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Large stones content	1.00 0.09 0.03

Table 8b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
107: Ridgecrest-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Carbonate content Gravel content Large stones content Depth to bedrock	1.00 1.00 0.68 0.68 0.10
Hondoho-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Large stones content	1.00 0.09 0.03
Hymas-----	15	Very limited Slope Large stones content	1.00 0.32	Very limited Slope Large stones content	1.00 0.32	Very limited Depth to bedrock Slope Droughty Large stones content Carbonate content	1.00 1.00 1.00 1.00 1.00
108: Ridgecrest-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Carbonate content Gravel content Large stones content Depth to bedrock	1.00 1.00 0.68 0.68 0.10
Hondoho-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Large stones content	1.00 0.09 0.03
Lizdale-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content Carbonate content Droughty Large stones content	1.00 1.00 1.00 0.39 0.08
109: Ridgecrest-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Carbonate content Gravel content Large stones content Depth to bedrock	1.00 1.00 0.68 0.68 0.10
Hymas-----	30	Very limited Slope Large stones content	1.00 0.32	Very limited Slope Large stones content	1.00 0.32	Very limited Depth to bedrock Slope Droughty Large stones content Carbonate content	1.00 1.00 1.00 1.00 1.00

Table 8b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
110: Ririe-----	50	Not limited		Not limited		Somewhat limited Slope	0.01
Buist-----	25	Not limited		Not limited		Somewhat limited Large stones content Gravel content Slope	0.08 0.01 0.01
111: Ririe-----	50	Not limited		Not limited		Somewhat limited Slope	0.01
Cedarhill-----	25	Not limited		Not limited		Somewhat limited Large stones content Droughty Slope	0.08 0.01 0.01
112: Ririe-----	50	Very limited Water erosion Slope	1.00 0.02	Very limited Water erosion	1.00	Very limited Slope	1.00
Cedarhill-----	25	Somewhat limited Slope	0.02	Not limited		Very limited Slope Large stones content Droughty	1.00 0.08 0.01
113: Ririe-----	50	Very limited Water erosion Slope	1.00 0.02	Very limited Water erosion	1.00	Very limited Slope	1.00
Hondoho-----	25	Somewhat limited Slope	0.02	Not limited		Very limited Slope Gravel content Large stones content	1.00 0.09 0.03
114: Ririe-----	40	Not limited		Not limited		Not limited	
Iphil-----	25	Not limited		Not limited		Not limited	
Kucera-----	20	Not limited		Not limited		Not limited	
115: Ririe-----	30	Not limited		Not limited		Somewhat limited Slope	0.01
Iphil-----	25	Not limited		Not limited		Somewhat limited Slope	0.01
Rexburg-----	25	Not limited		Not limited		Somewhat limited Slope	0.01

Table 8b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
116: Ririe-----	45	Not limited		Not limited		Somewhat limited Slope	0.01
Rexburg-----	40	Not limited		Not limited		Somewhat limited Slope	0.01
117: Ririe-----	50	Not limited		Not limited		Somewhat limited Slope	0.01
Watercanyon-----	25	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Somewhat limited Slope	0.01
118: Ririe-----	45	Very limited Water erosion Slope	1.00 0.68	Very limited Water erosion	1.00	Very limited Slope	1.00
Watercanyon-----	35	Very limited Water erosion Slope Dusty	1.00 0.68 0.50	Very limited Water erosion Dusty	1.00 0.50	Very limited Slope	1.00
119: Samaria-----	90	Not limited		Not limited		Not limited	
120: Samaria-----	90	Not limited		Not limited		Not limited	
121: Samaria-----	55	Not limited		Not limited		Somewhat limited Slope	0.01
Pollynot-----	30	Not limited		Not limited		Somewhat limited Slope	0.01
122: Samaria-----	50	Not limited		Not limited		Somewhat limited Slope	0.01
Sterling-----	35	Somewhat limited Large stones content	0.08	Somewhat limited Large stones content	0.08	Very limited Large stones content Gravel content Droughty Slope	1.00 0.61 0.16 0.01
123: Sterling-----	80	Somewhat limited Large stones content Slope	0.08 0.02	Somewhat limited Large stones content	0.08	Very limited Slope Large stones content Gravel content Droughty	1.00 1.00 0.61 0.16
124: Thatcher-----	85	Not limited		Not limited		Somewhat limited Slope	0.01

Table 8b.--Recreational Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
125: Thatcher-----	45	Somewhat limited Slope	0.68	Not limited		Very limited Slope	1.00
Jensen-----	35	Very limited Water erosion Slope	1.00 0.68	Very limited Water erosion	1.00	Very limited Slope	1.00
126: Freedom-----	75	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Not limited	
127: Tickason-----	80	Not limited		Not limited		Not limited	
128: Tickason-----	85	Not limited		Not limited		Not limited	
129: Tirod-----	85	Not limited		Not limited		Not limited	
130: Toefoot-----	90	Not limited		Not limited		Not limited	
131: Welby-----	65	Not limited		Not limited		Very limited Sodium content	1.00
Parleys-----	20	Not limited		Not limited		Not limited	
132: Wursten-----	85	Not limited		Not limited		Somewhat limited Slope Gravel content Large stones content	0.16 0.11 0.01
133: Yago-----	40	Very limited Slope Large stones content	1.00 0.18	Somewhat limited Slope Large stones content	0.22 0.18	Very limited Slope Large stones content	1.00 1.00
Manila-----	35	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.22	Very limited Slope	1.00
134: Water-----	100	Not rated		Not rated		Not rated	

Table 9a.--Building Site Development (Part 1)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1:							
Araveton-----	50	Somewhat limited Shrink-swell Slope	0.50 0.01	Somewhat limited Shrink-swell Slope	0.50 0.01	Very limited Slope Shrink-swell	1.00 0.50
Hades-----	25	Somewhat limited Shrink-swell Slope	0.50 0.01	Somewhat limited Shrink-swell Slope	0.50 0.01	Very limited Slope Shrink-swell	1.00 0.50
2:							
Arbone-----	75	Not limited		Not limited		Not limited	
3:							
Arbone-----	90	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
4:							
Arbone-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
5:							
Arbone-----	35	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Hondoho-----	30	Somewhat limited Shrink-swell Large stones content Slope	0.50 0.13 0.01	Somewhat limited Large stones content Slope	0.13 0.01	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13
Cedarhill-----	20	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
6:							
Arbone-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Hondoho-----	25	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13	Very limited Slope Large stones content	1.00 0.13	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13
Cedarhill-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
7:							
Bayhook-----	90	Not limited		Not limited		Not limited	
8:							
Bayhook-----	55	Not limited		Not limited		Not limited	
Ecur-----	35	Not limited		Not limited		Not limited	

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
9: Bingham-----	90	Somewhat limited Shrink-swell	0.50	Not limited		Somewhat limited Shrink-swell	0.50
10: Bingham-----	45	Somewhat limited Shrink-swell	0.50	Not limited		Somewhat limited Shrink-swell	0.50
Tirod-----	35	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
11: Bloor-----	50	Not limited		Somewhat limited Depth to saturated zone	0.03	Not limited	
Brinnum-----	35	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
12: Bothwell-----	80	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
13: Bothwell-----	35	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Hades-----	30	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Justesen-----	20	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
14: Brinnum-----	30	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
Logan-----	30	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
Langless-----	25	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
15: Buckboard-----	80	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
16: Buist-----	75	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
17: Calpac-----	30	Very limited Slope Large stones content Shrink-swell	1.00 0.85 0.50	Very limited Slope Large stones content Shrink-swell	1.00 0.85 0.50	Very limited Slope Large stones content Shrink-swell	1.00 0.85 0.50
Ridgecrest-----	30	Very limited Slope Large stones content Depth to hard bedrock	1.00 0.97 0.10	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 0.97	Very limited Slope Large stones content Depth to hard bedrock	1.00 0.97 0.10
Ireland-----	25	Very limited Slope Large stones content Depth to hard bedrock	1.00 1.00 0.64	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00	Very limited Slope Large stones content Depth to hard bedrock	1.00 1.00 0.64
18: Cedarhill-----	85	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
19: Cedarhill-----	75	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
20: Cedarhill-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Hymas-----	30	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00
21: Cedarhill-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Lostine-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
22: Collinston-----	85	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
23: Collinston-----	45	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Slope Shrink-swell	0.88 0.50

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
23: Kearns-----	30	Somewhat limited Shrink-swell	0.50	Not limited		Somewhat limited Slope Shrink-swell	0.88 0.50
24: Copenhagen-----	35	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 1.00
Lonigan-----	30	Very limited Slope	1.00	Very limited Slope Depth to soft bedrock	1.00 0.20	Very limited Slope	1.00
Manila-----	20	Very limited Shrink-swell Slope	1.00 1.00	Very limited Shrink-swell Slope	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
25: Darkbull-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Pyrat-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Ecur-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
26: DeJarnet-----	90	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
27: Dumps, mine-----	100	Not rated		Not rated		Not rated	
28: Ecur-----	85	Not limited		Not limited		Not limited	
29: Ecur-----	45	Not limited		Not limited		Somewhat limited Slope	0.12
Darkbull-----	30	Not limited		Not limited		Somewhat limited Slope	0.12
30: Elevator-----	80	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Depth to saturated zone	0.50 0.03	Somewhat limited Shrink-swell	0.50
31: Elevator-----	40	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Depth to saturated zone	0.50 0.03	Somewhat limited Shrink-swell	0.50
Jensen-----	35	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
32: Elevator-----	40	Somewhat limited Shrink-swell Slope	0.50 0.01	Somewhat limited Shrink-swell Depth to saturated zone Slope	0.50 0.03 0.01	Very limited Slope Shrink-swell	1.00 0.50
Jensen-----	35	Somewhat limited Shrink-swell Slope	0.50 0.01	Somewhat limited Shrink-swell Slope	0.50 0.01	Very limited Slope Shrink-swell	1.00 0.50
33: Fridlo-----	75	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell Depth to saturated zone	0.50 0.29	Somewhat limited Shrink-swell	0.50
34: Goosenawt-----	75	Very limited Flooding Shrink-swell	1.00 0.50	Very limited Flooding Shrink-swell	1.00 0.50	Very limited Flooding Shrink-swell	1.00 0.50
35: Hans-----	80	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
36: Highcreek-----	45	Somewhat limited Shrink-swell Slope	0.50 0.01	Somewhat limited Shrink-swell Slope	0.50 0.01	Very limited Slope Shrink-swell	1.00 0.50
Sterling-----	30	Somewhat limited Large stones content Slope	0.04 0.01	Somewhat limited Large stones content Slope	0.04 0.01	Very limited Slope Large stones content	1.00 0.04
37: Highcreek-----	40	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Sterling-----	35	Very limited Slope Large stones content	1.00 0.04	Very limited Slope Large stones content	1.00 0.04	Very limited Slope Large stones content	1.00 0.04
38: Hillfield-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Kucera-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
39: Hillfield-----	65	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Kucera-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
40:							
Hondoho-----	35	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13	Very limited Slope Large stones content	1.00 0.13	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13
Calpac-----	20	Very limited Slope Large stones content Shrink-swell	1.00 0.85 0.50	Very limited Slope Large stones content Shrink-swell	1.00 0.85 0.50	Very limited Slope Large stones content Shrink-swell	1.00 0.85 0.50
Lizdale-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
41:							
Hondoho-----	35	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13	Very limited Slope Large stones content	1.00 0.13	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13
Hymas-----	25	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00
Pavohroo-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
42:							
Hondoho-----	35	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13	Very limited Slope Large stones content	1.00 0.13	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13
Hymas-----	25	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00
Pavohroo-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
43:							
Hondoho-----	35	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13	Very limited Slope Large stones content	1.00 0.13	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
43: Ridgecrest-----	30	Very limited Slope Large stones content Depth to hard bedrock	 1.00 0.97 0.10	Very limited Depth to hard bedrock Slope Large stones content	 1.00 1.00 0.97	Very limited Slope Large stones content Depth to hard bedrock	 1.00 0.97 0.10
Hades-----	20	Very limited Slope Shrink-swell	 1.00 0.50	Very limited Slope Shrink-swell	 1.00 0.50	Very limited Slope Shrink-swell	 1.00 0.50
44: Hutchley-----	30	Very limited Depth to hard bedrock Slope Large stones content Shrink-swell	 1.00 1.00 0.55 0.50	Very limited Depth to hard bedrock Slope Large stones content Shrink-swell	 1.00 1.00 0.55 0.50	Very limited Depth to hard bedrock Slope Large stones content Shrink-swell	 1.00 1.00 0.55 0.50
McCarey-----	25	Very limited Slope Depth to hard bedrock Shrink-swell	 1.00 0.95 0.50	Very limited Depth to hard bedrock Slope Shrink-swell	 1.00 1.00 0.50	Very limited Slope Depth to hard bedrock Shrink-swell	 1.00 0.95 0.50
Araveton-----	25	Very limited Slope Shrink-swell	 1.00 0.50	Very limited Slope Shrink-swell	 1.00 0.50	Very limited Slope Shrink-swell	 1.00 0.50
45: Hymas-----	35	Very limited Slope Depth to hard bedrock Large stones content	 1.00 1.00 1.00	Very limited Slope Depth to hard bedrock Large stones content	 1.00 1.00 1.00	Very limited Slope Depth to hard bedrock Large stones content	 1.00 1.00 1.00
Calpac-----	25	Very limited Slope Large stones content Shrink-swell	 1.00 0.85 0.50	Very limited Slope Large stones content Shrink-swell	 1.00 0.85 0.50	Very limited Slope Large stones content Shrink-swell	 1.00 0.85 0.50
Ireland-----	20	Very limited Slope Large stones content Depth to hard bedrock	 1.00 1.00 0.64	Very limited Slope Depth to hard bedrock Large stones content	 1.00 1.00 1.00	Very limited Slope Large stones content Depth to hard bedrock	 1.00 1.00 0.64
46: Hymas-----	30	Very limited Slope Depth to hard bedrock Large stones content	 1.00 1.00 1.00	Very limited Slope Depth to hard bedrock Large stones content	 1.00 1.00 1.00	Very limited Slope Depth to hard bedrock Large stones content	 1.00 1.00 1.00

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
46: Northwater-----	30	Very limited Slope	1.00	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope	1.00
Clayburn-----	20	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
47: Hymas-----	45	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00
Povey-----	30	Very limited Slope Large stones content	1.00 0.07	Very limited Slope Large stones content	1.00 0.07	Very limited Slope Large stones content	1.00 0.07
48: Hymas-----	35	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00
Povey-----	25	Very limited Slope Large stones content	1.00 0.07	Very limited Slope Large stones content	1.00 0.07	Very limited Slope Large stones content	1.00 0.07
Pavohroo-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
49: Inkom-----	85	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
50: Iphil-----	50	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Very limited Slope	1.00
Ririe-----	20	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Very limited Slope	1.00
Watercanyon-----	15	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
51: Ireland-----	40	Very limited Slope Large stones content Depth to hard bedrock	1.00 1.00 0.64	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00	Very limited Slope Large stones content Depth to hard bedrock	1.00 1.00 0.64

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
51: Calpac-----	35	Very limited Slope Large stones content Shrink-swell	1.00 0.85 0.50	Very limited Slope Large stones content Shrink-swell	1.00 0.85 0.50	Very limited Slope Large stones content Shrink-swell	1.00 0.85 0.50
52: Jensen-----	80	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
53: Jensen-----	80	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
54: Jensen-----	30	Somewhat limited Shrink-swell Slope	0.50 0.16	Somewhat limited Shrink-swell Slope	0.50 0.16	Very limited Slope Shrink-swell	1.00 0.50
Iphil-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Wursten-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
55: Jovine-----	80	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.03	Very limited Flooding	1.00
56: Justesen-----	75	Somewhat limited Shrink-swell Slope	0.50 0.01	Somewhat limited Shrink-swell Slope	0.50 0.01	Very limited Slope Shrink-swell	1.00 0.50
57: Justesen-----	75	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
58: Justesen-----	50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Ririe-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Buist-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
59: Kearns-----	80	Somewhat limited Shrink-swell	0.50	Not limited		Somewhat limited Shrink-swell	0.50
60: Kearns-----	75	Somewhat limited Shrink-swell	0.50	Not limited		Somewhat limited Shrink-swell	0.50

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
61: Kidman-----	90	Not limited		Not limited		Not limited	
62: Kidman-----	60	Not limited		Not limited		Not limited	
Preston-----	25	Not limited		Not limited		Somewhat limited Slope	0.88
63: Kucera-----	85	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
64: Lagonot-----	90	Very limited Flooding Shrink-swell	1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 0.99 0.50	Very limited Flooding Shrink-swell	1.00 0.50
65: Langless-----	85	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
66: Langless-----	55	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
Logan-----	30	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
67: Lanoak-----	90	Not limited		Not limited		Not limited	
68: Lanoak-----	90	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
69: Lanoak-----	45	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Very limited Slope	1.00
Hondoho-----	35	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13
70: Logan-----	95	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
71: Lonigan-----	45	Very limited Slope	1.00	Very limited Slope Depth to soft bedrock	1.00 0.20	Very limited Slope	1.00
Lizdale-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
72: Lostine-----	75	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
73: Manila-----	85	Very limited Shrink-swell Slope	1.00 0.01	Very limited Shrink-swell Slope	1.00 0.01	Very limited Shrink-swell Slope	1.00 1.00
74: Manila-----	45	Very limited Shrink-swell Slope	1.00 0.01	Very limited Shrink-swell Slope	1.00 0.01	Very limited Shrink-swell Slope	1.00 1.00
Broadhead-----	30	Very limited Shrink-swell Slope	1.00 0.01	Very limited Shrink-swell Slope	1.00 0.01	Very limited Shrink-swell Slope	1.00 1.00
75: Manila-----	45	Very limited Shrink-swell Slope	1.00 1.00	Very limited Shrink-swell Slope	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
Broadhead-----	30	Very limited Shrink-swell Slope	1.00 1.00	Very limited Shrink-swell Slope	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
76: Manila-----	50	Very limited Shrink-swell Slope	1.00 1.00	Very limited Shrink-swell Slope	1.00 1.00	Very limited Shrink-swell Slope	1.00 1.00
Lonigan-----	30	Very limited Slope	1.00	Very limited Slope Depth to soft bedrock	1.00 0.20	Very limited Slope	1.00
77: Manila-----	50	Very limited Shrink-swell Slope	1.00 0.01	Very limited Shrink-swell Slope	1.00 0.01	Very limited Shrink-swell Slope	1.00 1.00
Obnot-----	25	Very limited Shrink-swell Slope	1.00 0.01	Very limited Shrink-swell Slope	1.00 0.01	Very limited Shrink-swell Slope	1.00 1.00
78: Manila-----	45	Very limited Shrink-swell Slope	1.00 0.01	Very limited Shrink-swell Slope	1.00 0.01	Very limited Shrink-swell Slope	1.00 1.00

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
78: Yago-----	40	Very limited Shrink-swell Large stones content Slope	1.00 0.98 0.01	Very limited Shrink-swell Large stones content Slope	1.00 0.98 0.01	Very limited Shrink-swell Slope Large stones content	1.00 1.00 0.98
79: Manila-----	45	Very limited Shrink-swell Slope	1.00 1.00	Very limited Shrink-swell Slope	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
Yago-----	35	Very limited Shrink-swell Slope Large stones content	1.00 1.00 0.98	Very limited Shrink-swell Slope Large stones content	1.00 1.00 0.98	Very limited Slope Shrink-swell Large stones content	1.00 1.00 0.98
80: Mellor-----	50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
Freedom-----	35	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
81: Neeley-----	90	Not limited		Not limited		Not limited	
82: Northwater-----	35	Very limited Slope	1.00	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope	1.00
Povey-----	30	Very limited Slope Large stones content	1.00 0.07	Very limited Slope Large stones content	1.00 0.07	Very limited Slope Large stones content	1.00 0.07
Pavohroo-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
83: Parehat-----	90	Very limited Flooding Shrink-swell	1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 0.99 0.50	Very limited Flooding Shrink-swell	1.00 0.50
84: Parleys-----	80	Somewhat limited Shrink-swell	0.50	Not limited		Somewhat limited Shrink-swell	0.50
85: Parleys-----	85	Somewhat limited Shrink-swell	0.50	Not limited		Somewhat limited Shrink-swell	0.50
86: Parleys-----	50	Somewhat limited Shrink-swell	0.50	Not limited		Somewhat limited Slope Shrink-swell	0.88 0.50

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
86: Welby-----	35	Not limited		Not limited		Somewhat limited Slope	0.88
87: Parleys-----	60	Somewhat limited Shrink-swell Slope	0.50 0.01	Somewhat limited Slope	0.01	Very limited Slope Shrink-swell	1.00 0.50
Wheelon-----	15	Somewhat limited Shrink-swell Slope	0.50 0.01	Somewhat limited Shrink-swell Slope	0.50 0.01	Very limited Slope Shrink-swell	1.00 0.50
88: Pavohroo-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Povey-----	30	Very limited Slope Large stones content	1.00 0.07	Very limited Slope Large stones content	1.00 0.07	Very limited Slope Large stones content	1.00 0.07
89: Pavohroo-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Stines-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Lonigan-----	20	Very limited Slope	1.00	Very limited Slope Depth to soft bedrock	1.00 0.20	Very limited Slope	1.00
90: Pits, gravel-----	100	Not rated		Not rated		Not rated	
91: Povey-----	35	Very limited Slope Large stones content	1.00 0.07	Very limited Slope Large stones content	1.00 0.07	Very limited Slope Large stones content	1.00 0.07
Hades-----	30	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Hondoho-----	25	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13	Very limited Slope Large stones content	1.00 0.13	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13
92: Povey-----	45	Very limited Slope Large stones content	1.00 0.07	Very limited Slope Large stones content	1.00 0.07	Very limited Slope Large stones content	1.00 0.07

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
92: Ireland-----	25	Very limited Slope Large stones content Depth to hard bedrock	1.00 1.00 0.64	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00	Very limited Slope Large stones content Depth to hard bedrock	1.00 1.00 0.64
Calpac-----	15	Very limited Slope Large stones content Shrink-swell	1.00 0.85 0.50	Very limited Slope Large stones content Shrink-swell	1.00 0.85 0.50	Very limited Slope Large stones content Shrink-swell	1.00 0.85 0.50
93: Povey-----	45	Very limited Slope Large stones content	1.00 0.07	Very limited Slope Large stones content	1.00 0.07	Very limited Slope Large stones content	1.00 0.07
Pavohroo-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
94: Povirt-----	85	Very limited Flooding Depth to saturated zone Shrink-swell Ponding	1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Shrink-swell Ponding	1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Shrink-swell Ponding	1.00 1.00 1.00 1.00
95: Raldridge-----	75	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
96: Rexburg-----	85	Not limited		Not limited		Not limited	
97: Rexburg-----	50	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Arbone-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Ririe-----	15	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
98: Rexburg-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Arbone-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Ririe-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
99: Rexburg-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
99:							
Iphil-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Watercanyon-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
100:							
Rexburg-----	55	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Lanoak-----	35	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
101:							
Rexburg-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Lanoak-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
102:							
Rexburg-----	35	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Lanoak-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Watercanyon-----	20	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
103:							
Rexburg-----	50	Not limited		Not limited		Somewhat limited Slope	0.12
Ririe-----	20	Not limited		Not limited		Somewhat limited Slope	0.12
Kucera-----	15	Not limited		Not limited		Somewhat limited Slope	0.12
104:							
Rexburg-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Thatcher-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Ririe-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
105:							
Rexburg-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Watercanyon-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Lanoak-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
106: Ridgecrest-----	45	Very limited Slope Large stones content Depth to hard bedrock	1.00 0.97 0.10	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 0.97	Very limited Slope Large stones content Depth to hard bedrock	1.00 0.97 0.10
Hondoho-----	35	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13	Very limited Slope Large stones content	1.00 0.13	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13
107: Ridgecrest-----	35	Very limited Slope Large stones content Depth to hard bedrock	1.00 0.97 0.10	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 0.97	Very limited Slope Large stones content Depth to hard bedrock	1.00 0.97 0.10
Hondoho-----	30	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13	Very limited Slope Large stones content	1.00 0.13	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13
Hymas-----	15	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00
108: Ridgecrest-----	35	Very limited Slope Large stones content Depth to hard bedrock	1.00 0.97 0.10	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 0.97	Very limited Slope Large stones content Depth to hard bedrock	1.00 0.97 0.10
Hondoho-----	30	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13	Very limited Slope Large stones content	1.00 0.13	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13
Lizdale-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
109: Ridgecrest-----	45	Very limited Slope Large stones content Depth to hard bedrock	1.00 0.97 0.10	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 0.97	Very limited Slope Large stones content Depth to hard bedrock	1.00 0.97 0.10

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
109: Hymas-----	30	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00	Very limited Slope Depth to hard bedrock Large stones content	1.00 1.00 1.00
110: Ririe-----	50	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Buist-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
111: Ririe-----	50	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Cedarhill-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
112: Ririe-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Cedarhill-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
113: Ririe-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Hondoho-----	25	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13	Very limited Slope Large stones content	1.00 0.13	Very limited Slope Shrink-swell Large stones content	1.00 0.50 0.13
114: Ririe-----	40	Not limited		Not limited		Somewhat limited Slope	0.12
Iphil-----	25	Not limited		Not limited		Somewhat limited Slope	0.12
Kucera-----	20	Not limited		Not limited		Somewhat limited Slope	0.12
115: Ririe-----	30	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Iphil-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Rexburg-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
116: Ririe-----	45	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
116: Rexburg-----	40	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
117: Ririe-----	50	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Watercanyon-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
118: Ririe-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Watercanyon-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
119: Samaria-----	90	Not limited		Not limited		Not limited	
120: Samaria-----	90	Not limited		Not limited		Somewhat limited Slope	0.50
121: Samaria-----	55	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Pollynot-----	30	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
122: Samaria-----	50	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
Sterling-----	35	Somewhat limited Large stones content Slope	0.04 0.01	Somewhat limited Large stones content Slope	0.04 0.01	Very limited Slope Large stones content	1.00 0.04
123: Sterling-----	80	Very limited Slope Large stones content	1.00 0.04	Very limited Slope Large stones content	1.00 0.04	Very limited Slope Large stones content	1.00 0.04
124: Thatcher-----	85	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Very limited Slope	1.00
125: Thatcher-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Jensen-----	35	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
126: Freedom-----	75	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50

Table 9a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
127: Tickason-----	80	Not limited		Not limited		Not limited	
128: Tickason-----	85	Not limited		Not limited		Not limited	
129: Tirod-----	85	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50	Somewhat limited Shrink-swell	0.50
130: Toefoot-----	90	Not limited		Not limited		Not limited	
131: Welby-----	65	Not limited		Not limited		Not limited	
Parleys-----	20	Somewhat limited Shrink-swell	0.50	Not limited		Somewhat limited Shrink-swell	0.50
132: Wursten-----	85	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
133: Yago-----	40	Very limited Slope Shrink-swell Large stones content	1.00 1.00 0.98	Very limited Slope Shrink-swell Large stones content	1.00 1.00 0.98	Very limited Slope Shrink-swell Large stones content	1.00 1.00 0.98
Manila-----	35	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00	Very limited Slope Shrink-swell	1.00 1.00
134: Water-----	100	Not rated		Not rated		Not rated	

Table 9b.--Building Site Development (Part 2)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1: Araveton-----	50	Very limited Low strength Shrink-swell Frost action Slope	1.00 0.50 0.50 0.01	Very limited Cutbanks cave Slope	1.00 0.01	Somewhat limited Slope	0.01
Hades-----	25	Very limited Low strength Shrink-swell Frost action Slope	1.00 0.50 0.50 0.01	Very limited Cutbanks cave Slope	1.00 0.01	Somewhat limited Slope	0.01
2: Arbone-----	75	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Not limited	
3: Arbone-----	90	Somewhat limited Frost action Slope	0.50 0.01	Very limited Cutbanks cave Slope	1.00 0.01	Somewhat limited Slope	0.01
4: Arbone-----	85	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope	1.00
5: Arbone-----	35	Somewhat limited Frost action Slope	0.50 0.01	Very limited Cutbanks cave Slope	1.00 0.01	Somewhat limited Slope	0.01
Hondoho-----	30	Somewhat limited Shrink-swell Frost action Large stones content Slope	0.50 0.50 0.13 0.01	Somewhat limited Large stones content Cutbanks cave Slope	0.13 0.10 0.01	Somewhat limited Gravel content Large stones content Slope	0.09 0.03 0.01
Cedarhill-----	20	Somewhat limited Frost action Slope	0.50 0.01	Very limited Cutbanks cave Slope	1.00 0.01	Somewhat limited Large stones content Droughty Slope	0.08 0.01 0.01
6: Arbone-----	45	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope	1.00
Hondoho-----	25	Very limited Slope Shrink-swell Frost action Large stones content	1.00 0.50 0.50 0.13	Very limited Slope Large stones content Cutbanks cave	1.00 0.13 0.10	Very limited Slope Gravel content Large stones content	1.00 0.09 0.03

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
6: Cedarhill-----	20	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Large stones content Droughty	1.00 0.08 0.01
7: Bayhook-----	90	Not limited		Somewhat limited Cutbanks cave	0.10	Very limited Sodium content Salinity	1.00 0.13
8: Bayhook-----	55	Not limited		Somewhat limited Cutbanks cave	0.10	Very limited Sodium content Salinity	1.00 0.13
Ecur-----	35	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Very limited Sodium content	1.00
9: Bingham-----	90	Somewhat limited Shrink-swell Frost action Low strength	0.50 0.50 0.22	Very limited Cutbanks cave	1.00	Somewhat limited Gravel content Droughty	0.02 0.01
10: Bingham-----	45	Somewhat limited Shrink-swell Frost action Low strength	0.50 0.50 0.22	Very limited Cutbanks cave	1.00	Somewhat limited Gravel content Droughty	0.02 0.01
Tirod-----	35	Very limited Low strength Shrink-swell Frost action	1.00 0.50 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
11: Bloor-----	50	Somewhat limited Frost action	0.50	Somewhat limited Cutbanks cave Depth to saturated zone	0.10 0.03	Very limited Salinity Sodium content	1.00 1.00
Brinnum-----	35	Very limited Frost action Flooding Low strength Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.99 0.50	Very limited Depth to saturated zone Flooding Cutbanks cave	1.00 0.60 0.10	Very limited Sodium content Depth to saturated zone Flooding Salinity Droughty	1.00 0.99 0.60 0.13 0.01
12: Bothwell-----	80	Very limited Frost action Low strength Shrink-swell	1.00 1.00 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
13: Bothwell-----	35	Very limited Frost action Low strength Slope Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Hades-----	30	Very limited Low strength Slope Shrink-swell Frost action	 1.00 1.00 0.50 0.50	Very limited Cutbanks cave Slope	 1.00 1.00	Very limited Slope	 1.00
Justesen-----	20	Very limited Low strength Slope Shrink-swell Frost action	 1.00 1.00 0.50 0.50	Very limited Cutbanks cave Slope	 1.00 1.00	Very limited Slope	 1.00
14: Brinnum-----	30	Very limited Frost action Flooding Low strength Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 0.99 0.50	Very limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.60 0.10	Very limited Sodium content Depth to saturated zone Flooding Salinity Droughty	 1.00 0.99 0.60 0.13 0.01
Logan-----	30	Very limited Depth to saturated zone Frost action Low strength Shrink-swell Flooding	 1.00 1.00 1.00 0.50 0.40	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
Langless-----	25	Very limited Frost action Flooding Low strength Depth to saturated zone	 1.00 1.00 1.00 0.94	Very limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.80 0.10	Very limited Flooding Sodium content Carbonate content Depth to saturated zone	 1.00 1.00 1.00 0.94
15: Buckboard-----	80	Very limited Low strength Shrink-swell Frost action	 1.00 0.50 0.50	Somewhat limited Cutbanks cave	 0.10	Not limited	
16: Buist-----	75	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 1.00	Very limited Slope Large stones content Gravel content	 1.00 0.08 0.01

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
17: Calpac-----	30	Very limited Slope Large stones content Shrink-swell Frost action	1.00 0.85 0.50 0.50	Very limited Slope Large stones content Cutbanks cave	1.00 0.85 0.10	Very limited Slope Gravel content Droughty	1.00 0.25 0.05
Ridgecrest-----	30	Very limited Slope Large stones content Frost action Depth to hard bedrock	1.00 0.97 0.50 0.10	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	1.00 1.00 0.97 0.10	Very limited Slope Carbonate content Gravel content Large stones content Depth to bedrock	1.00 1.00 0.68 0.68 0.10
Ireland-----	25	Very limited Slope Large stones content Depth to hard bedrock Frost action	1.00 1.00 0.64 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Slope Droughty Gravel content Depth to bedrock Large stones content	1.00 0.99 0.84 0.65 0.54
18: Cedarhill-----	85	Somewhat limited Frost action Slope	0.50 0.01	Very limited Cutbanks cave Slope	1.00 0.01	Somewhat limited Large stones content Droughty Slope	0.08 0.01 0.01
19: Cedarhill-----	75	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Large stones content Droughty	1.00 0.08 0.01
20: Cedarhill-----	45	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Large stones content Droughty	1.00 0.08 0.01
Hymas-----	30	Very limited Depth to hard bedrock Slope Large stones content Frost action	1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Depth to bedrock Slope Droughty Large stones content Carbonate content	1.00 1.00 1.00 1.00 1.00
21: Cedarhill-----	40	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Large stones content Droughty	1.00 0.08 0.01

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
21: Lostine-----	40	Very limited Slope Frost action Low strength	 1.00 0.50 0.22	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
22: Collinston-----	85	Very limited Frost action Low strength Shrink-swell	 1.00 1.00 0.50	Somewhat limited Cutbanks cave	 0.10	Not limited	
23: Collinston-----	45	Very limited Frost action Low strength Shrink-swell	 1.00 1.00 0.50	Somewhat limited Cutbanks cave	 0.10	Not limited	
Kearns-----	30	Very limited Frost action Low strength Shrink-swell	 1.00 1.00 0.50	Somewhat limited Cutbanks cave	 0.10	Not limited	
24: Copenhagen-----	35	Very limited Depth to hard bedrock Slope Frost action	 1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	 1.00 1.00 0.10	Very limited Depth to bedrock Droughty Gravel content Slope Large stones content	 1.00 1.00 1.00 1.00 0.11
Lonigan-----	30	Very limited Slope Frost action	 1.00 0.50	Very limited Cutbanks cave Slope Depth to soft bedrock	 1.00 1.00 0.20	Very limited Slope Depth to bedrock	 1.00 0.20
Manila-----	20	Very limited Low strength Shrink-swell Slope Frost action	 1.00 1.00 1.00 0.50	Very limited Slope Too clayey Cutbanks cave	 1.00 0.12 0.10	Very limited Slope	 1.00
25: Darkbull-----	40	Very limited Slope Frost action	 1.00 0.50	Very limited Cutbanks cave Slope	 1.00 1.00	Very limited Slope Sodium content Gravel content	 1.00 1.00 0.08
Pyrat-----	30	Very limited Slope Frost action	 1.00 0.50	Very limited Cutbanks cave Slope	 1.00 1.00	Very limited Slope Gravel content	 1.00 0.20
Ecur-----	25	Very limited Slope Frost action	 1.00 0.50	Very limited Cutbanks cave Slope	 1.00 1.00	Very limited Sodium content Slope	 1.00 1.00
26: DeJarnet-----	90	Somewhat limited Shrink-swell Frost action	 0.50 0.50	Very limited Cutbanks cave	 1.00	Somewhat limited Gravel content	 0.18

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets	Shallow excavations		Lawns and landscaping		
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
27: Dumps, mine-----	100	Not rated		Not rated		Not rated	
28: Ecur-----	85	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Very limited Sodium content	1.00
29: Ecur-----	45	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Very limited Sodium content	1.00
Darkbull-----	30	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Very limited Sodium content Gravel content	1.00 0.08
30: Elevator-----	80	Very limited Frost action Low strength Shrink-swell	1.00 1.00 0.50	Somewhat limited Cutbanks cave Depth to saturated zone	0.10 0.03	Not limited	
31: Elevator-----	40	Very limited Frost action Low strength Shrink-swell	1.00 1.00 0.50	Somewhat limited Cutbanks cave Depth to saturated zone	0.10 0.03	Not limited	
Jensen-----	35	Somewhat limited Shrink-swell Frost action	0.50 0.50	Very limited Cutbanks cave	1.00	Not limited	
32: Elevator-----	40	Very limited Frost action Low strength Shrink-swell Slope	1.00 1.00 0.50 0.01	Somewhat limited Cutbanks cave Depth to saturated zone Slope	0.10 0.03 0.01	Somewhat limited Slope	0.01
Jensen-----	35	Somewhat limited Shrink-swell Frost action Slope	0.50 0.50 0.01	Very limited Cutbanks cave Slope	1.00 0.01	Somewhat limited Slope	0.01
33: Fridlo-----	75	Very limited Frost action Low strength Shrink-swell	1.00 1.00 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	0.29 0.10	Very limited Sodium content	1.00
34: Goosenawt-----	75	Very limited Low strength Shrink-swell Frost action Flooding	1.00 0.50 0.50 0.40	Very limited Cutbanks cave	1.00	Somewhat limited Gravel content	0.08
35: Hans-----	80	Very limited Frost action Low strength Shrink-swell	1.00 1.00 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
36: Highcreek-----	45	Very limited Low strength Shrink-swell Frost action Slope	 1.00 0.50 0.50 0.01	Very limited Cutbanks cave Slope	 1.00 0.01	Somewhat limited Slope	 0.01
Sterling-----	30	Somewhat limited Frost action Large stones content Slope	 0.50 0.04 0.01	Very limited Cutbanks cave Large stones content Slope	 1.00 0.04 0.01	Very limited Large stones content Gravel content Droughty Slope	 1.00 0.61 0.16 0.01
37: Highcreek-----	40	Very limited Slope Low strength Shrink-swell Frost action	 1.00 1.00 0.50 0.50	Very limited Cutbanks cave Slope	 1.00 1.00	Very limited Slope	 1.00
Sterling-----	35	Very limited Slope Frost action Large stones content	 1.00 0.50 0.04	Very limited Cutbanks cave Slope Large stones content	 1.00 1.00 0.04	Very limited Slope Large stones content Gravel content Droughty	 1.00 1.00 0.61 0.16
38: Hillfield-----	50	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Kucera-----	30	Very limited Frost action Slope Low strength	 1.00 1.00 0.78	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
39: Hillfield-----	65	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Kucera-----	20	Very limited Slope Frost action Low strength	 1.00 1.00 0.78	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
40: Hondoho-----	35	Very limited Slope Shrink-swell Frost action Large stones content	 1.00 0.50 0.50 0.13	Very limited Slope Large stones content Cutbanks cave	 1.00 0.13 0.10	Very limited Slope Gravel content Large stones content	 1.00 0.09 0.03
Calpac-----	20	Very limited Slope Large stones content Shrink-swell Frost action	 1.00 0.85 0.50 0.50	Very limited Slope Large stones content Cutbanks cave	 1.00 0.85 0.10	Very limited Slope Gravel content Droughty	 1.00 0.25 0.05

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets	Shallow excavations		Lawns and landscaping		
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
40: Lizdale-----	20	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 1.00	Very limited Slope Gravel content Carbonate content Droughty Large stones content	 1.00 1.00 1.00 0.39 0.08
41: Hondoho-----	35	Very limited Slope Shrink-swell Frost action Large stones content	 1.00 0.50 0.50 0.13	Very limited Slope Large stones content Cutbanks cave	 1.00 0.13 0.10	Very limited Slope Gravel content Large stones content	 1.00 0.09 0.03
Hymas-----	25	Very limited Depth to hard bedrock Slope Large stones content Frost action	 1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	 1.00 1.00 1.00 0.10	Very limited Depth to bedrock Droughty Large stones content Slope Carbonate content	 1.00 1.00 1.00 1.00 1.00
Pavohroo-----	20	Very limited Slope Frost action	 1.00 0.50	Very limited Cutbanks cave Slope	 1.00 1.00	Very limited Slope	 1.00
42: Hondoho-----	35	Very limited Slope Shrink-swell Frost action Large stones content	 1.00 0.50 0.50 0.13	Very limited Slope Large stones content Cutbanks cave	 1.00 0.13 0.10	Very limited Slope Gravel content Large stones content	 1.00 0.09 0.03
Hymas-----	25	Very limited Depth to hard bedrock Slope Large stones content Frost action	 1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	 1.00 1.00 1.00 0.10	Very limited Depth to bedrock Slope Droughty Large stones content Carbonate content	 1.00 1.00 1.00 1.00 1.00
Pavohroo-----	20	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 1.00	Very limited Slope	 1.00
43: Hondoho-----	35	Very limited Slope Shrink-swell Frost action Large stones content	 1.00 0.50 0.50 0.13	Very limited Slope Large stones content Cutbanks cave	 1.00 0.13 0.10	Very limited Slope Gravel content Large stones content	 1.00 0.09 0.03

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
43: Ridgecrest-----	30	Very limited Slope Large stones content Frost action Depth to hard bedrock	 1.00 0.97 0.50 0.10	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	 1.00 1.00 0.97 0.10	Very limited Slope Carbonate content Gravel content Large stones content Depth to bedrock	 1.00 1.00 0.68 0.68 0.10
Hades-----	20	Very limited Low strength Slope Shrink-swell Frost action	 1.00 1.00 0.50 0.50	Very limited Cutbanks cave Slope	 1.00 1.00	Very limited Slope	 1.00
44: Hutchley-----	30	Very limited Depth to hard bedrock Slope Large stones content Shrink-swell Frost action	 1.00 1.00 0.55 0.50 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	 1.00 1.00 0.55 0.10	Very limited Depth to bedrock Droughty Slope Large stones content Gravel content	 1.00 1.00 1.00 0.16 0.01
McCarey-----	25	Very limited Low strength Slope Depth to hard bedrock Shrink-swell Frost action	 1.00 1.00 0.95 0.50 0.50	Very limited Depth to hard bedrock Slope Cutbanks cave	 1.00 1.00 0.10	Very limited Slope Depth to bedrock Large stones content	 1.00 0.95 0.01
Araveton-----	25	Very limited Low strength Slope Shrink-swell Frost action	 1.00 1.00 0.50 0.50	Very limited Cutbanks cave Slope	 1.00 1.00	Very limited Slope	 1.00
45: Hymas-----	35	Very limited Depth to hard bedrock Slope Large stones content Frost action	 1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	 1.00 1.00 1.00 0.10	Very limited Depth to bedrock Slope Droughty Large stones content Carbonate content	 1.00 1.00 1.00 1.00 1.00
Calpac-----	25	Very limited Slope Large stones content Shrink-swell Frost action	 1.00 0.85 0.50 0.50	Very limited Slope Large stones content Cutbanks cave	 1.00 0.85 0.10	Very limited Slope Gravel content Droughty	 1.00 0.25 0.05
Ireland-----	20	Very limited Slope Large stones content Depth to hard bedrock Frost action	 1.00 1.00 0.64 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	 1.00 1.00 1.00 0.10	Very limited Slope Droughty Gravel content Depth to bedrock Large stones content	 1.00 0.99 0.84 0.65 0.54

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
46: Hymas-----	30	Very limited Depth to hard bedrock Slope Large stones content Frost action	 1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	 1.00 1.00 1.00 0.10	Very limited Depth to bedrock Slope Droughty Large stones content Carbonate content	 1.00 1.00 1.00 1.00
Northwater-----	30	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 1.00	Very limited Slope	 1.00
Clayburn-----	20	Very limited Slope Frost action Low strength Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
47: Hymas-----	45	Very limited Depth to hard bedrock Slope Large stones content Frost action	 1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	 1.00 1.00 1.00 0.10	Very limited Depth to bedrock Slope Droughty Large stones content Carbonate content	 1.00 1.00 1.00 1.00
Povey-----	30	Very limited Slope Frost action Large stones content	 1.00 0.50 0.07	Very limited Slope Cutbanks cave Large stones content	 1.00 1.00 0.07	Very limited Slope Gravel content Large stones content	 1.00 0.49 0.11
48: Hymas-----	35	Very limited Depth to hard bedrock Slope Large stones content Frost action	 1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	 1.00 1.00 1.00 0.10	Very limited Depth to bedrock Slope Droughty Large stones content Carbonate content	 1.00 1.00 1.00 1.00
Povey-----	25	Very limited Slope Frost action Large stones content	 1.00 0.50 0.07	Very limited Slope Cutbanks cave Large stones content	 1.00 1.00 0.07	Very limited Slope Gravel content Large stones content	 1.00 0.49 0.11
Pavohroo-----	20	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 1.00	Very limited Slope	 1.00
49: Inkom-----	85	Very limited Depth to saturated zone Frost action Flooding Low strength Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.80 0.10	Very limited Flooding Depth to saturated zone	 1.00 1.00

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
50:							
Iphil-----	50	Very limited Frost action Slope	1.00 0.96	Somewhat limited Slope Cutbanks cave	0.96 0.10	Somewhat limited Slope	0.96
Ririe-----	20	Very limited Frost action Slope	1.00 0.96	Somewhat limited Slope Cutbanks cave	0.96 0.10	Somewhat limited Slope	0.96
Watercanyon-----	15	Very limited Frost action Slope	1.00 0.16	Somewhat limited Cutbanks cave Slope	0.50 0.16	Somewhat limited Slope	0.16
51:							
Ireland-----	40	Very limited Slope Large stones content Depth to hard bedrock Frost action	1.00 1.00 0.64 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Slope Droughty Gravel content Depth to bedrock Large stones content	1.00 0.99 0.84 0.65 0.54
Calpac-----	35	Very limited Slope Large stones content Shrink-swell Frost action	1.00 0.85 0.50 0.50	Very limited Slope Large stones content Cutbanks cave	1.00 0.85 0.10	Very limited Slope Gravel content Droughty	1.00 0.25 0.05
52:							
Jensen-----	80	Somewhat limited Shrink-swell Frost action	0.50 0.50	Very limited Cutbanks cave	1.00	Not limited	
53:							
Jensen-----	80	Somewhat limited Shrink-swell Frost action	0.50 0.50	Very limited Cutbanks cave	1.00	Not limited	
54:							
Jensen-----	30	Somewhat limited Shrink-swell Frost action Slope	0.50 0.50 0.16	Very limited Cutbanks cave Slope	1.00 0.16	Somewhat limited Slope	0.16
Iphil-----	25	Very limited Frost action Slope	1.00 0.01	Somewhat limited Cutbanks cave Slope	0.10 0.01	Somewhat limited Slope	0.01
Wursten-----	25	Somewhat limited Frost action Slope	0.50 0.01	Very limited Cutbanks cave Slope	1.00 0.01	Somewhat limited Gravel content Large stones content Slope	0.11 0.01 0.01
55:							
Jovine-----	80	Very limited Frost action Low strength Flooding	1.00 1.00 0.40	Somewhat limited Cutbanks cave Depth to saturated zone	0.10 0.03	Not limited	

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets	Shallow excavations		Lawns and landscaping		
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
56: Justesen-----	75	Very limited Low strength Shrink-swell Frost action Slope	 1.00 0.50 0.50 0.01	Very limited Cutbanks cave Slope	 1.00 0.01	Somewhat limited Slope	 0.01
57: Justesen-----	75	Very limited Low strength Slope Shrink-swell Frost action	 1.00 1.00 0.50 0.50	Very limited Cutbanks cave Slope	 1.00 1.00	Very limited Slope	 1.00
58: Justesen-----	50	Very limited Low strength Slope Shrink-swell Frost action	 1.00 1.00 0.50 0.50	Very limited Cutbanks cave Slope	 1.00 1.00	Very limited Slope	 1.00
Ririe-----	30	Very limited Frost action Slope	 1.00 1.00	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Buist-----	15	Very limited Slope Frost action	 1.00 0.50	Very limited Cutbanks cave Slope	 1.00 1.00	Very limited Slope Large stones content Gravel content	 1.00 0.08 0.01
59: Kearns-----	80	Very limited Frost action Low strength Shrink-swell	 1.00 1.00 0.50	Somewhat limited Cutbanks cave	 0.10	Not limited	
60: Kearns-----	75	Very limited Frost action Low strength Shrink-swell	 1.00 1.00 0.50	Somewhat limited Cutbanks cave	 0.10	Not limited	
61: Kidman-----	90	Somewhat limited Frost action	 0.50	Somewhat limited Cutbanks cave	 0.10	Not limited	
62: Kidman-----	60	Somewhat limited Frost action	 0.50	Somewhat limited Cutbanks cave	 0.10	Not limited	
Preston-----	25	Not limited		Very limited Cutbanks cave	 1.00	Very limited Droughty	 0.99
63: Kucera-----	85	Very limited Frost action Low strength Slope	 1.00 0.78 0.01	Somewhat limited Cutbanks cave Slope	 0.10 0.01	Somewhat limited Slope	 0.01

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
64: Lagonot-----	90	Very limited Low strength Shrink-swell Frost action Flooding	 1.00 0.50 0.50 0.40	Very limited Depth to saturated zone Cutbanks cave	 0.99 0.10	Not limited	
65: Langless-----	85	Very limited Frost action Flooding Low strength Depth to saturated zone	 1.00 1.00 1.00 0.94	Very limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.80 0.10	Very limited Flooding Sodium content Carbonate content Depth to saturated zone	 1.00 1.00 0.94
66: Langless-----	55	Very limited Frost action Flooding Low strength Depth to saturated zone	 1.00 1.00 1.00 0.94	Very limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.80 0.10	Very limited Flooding Sodium content Carbonate content Depth to saturated zone	 1.00 1.00 1.00 0.94
Logan-----	30	Very limited Depth to saturated zone Frost action Low strength Shrink-swell Flooding	 1.00 1.00 1.00 0.50 0.40	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	1.00
67: Lanoak-----	90	Very limited Frost action Low strength	 1.00 1.00	Somewhat limited Cutbanks cave	 0.10	Not limited	
68: Lanoak-----	90	Very limited Frost action Slope Low strength	 1.00 1.00 1.00	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	1.00
69: Lanoak-----	45	Very limited Frost action Low strength Slope	 1.00 1.00 0.84	Somewhat limited Slope Cutbanks cave	 0.84 0.10	Somewhat limited Slope	0.84
Hondoho-----	35	Very limited Slope Shrink-swell Frost action Large stones content	 1.00 0.50 0.50 0.13	Very limited Slope Large stones content Cutbanks cave	 1.00 0.13 0.10	Very limited Slope Gravel content Large stones content	 1.00 0.09 0.03

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
70: Logan-----	95	Very limited Depth to saturated zone Frost action Low strength Shrink-swell Flooding	1.00 1.00 1.00 0.50 0.40	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
71: Lonigan-----	45	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope Depth to soft bedrock	1.00 1.00 0.20	Very limited Slope Depth to bedrock	1.00 0.20
Lizdale-----	35	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Gravel content Slope Carbonate content Droughty Large stones content	1.00 1.00 1.00 0.39 0.08
72: Lostine-----	75	Very limited Slope Frost action Low strength	1.00 0.50 0.22	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
73: Manila-----	85	Very limited Low strength Shrink-swell Frost action Slope	1.00 1.00 0.50 0.01	Somewhat limited Too clayey Cutbanks cave Slope	0.12 0.10 0.01	Somewhat limited Slope	0.01
74: Manila-----	45	Very limited Low strength Shrink-swell Frost action Slope	1.00 1.00 0.50 0.01	Somewhat limited Too clayey Cutbanks cave Slope	0.12 0.10 0.01	Somewhat limited Slope	0.01
Broadhead-----	30	Very limited Low strength Shrink-swell Frost action Slope	1.00 1.00 0.50 0.01	Very limited Cutbanks cave Too clayey Slope	1.00 0.50 0.01	Somewhat limited Slope	0.01
75: Manila-----	45	Very limited Low strength Shrink-swell Slope Frost action	1.00 1.00 1.00 0.50	Very limited Slope Too clayey Cutbanks cave	1.00 0.12 0.10	Very limited Slope	1.00
Broadhead-----	30	Very limited Low strength Shrink-swell Slope Frost action	1.00 1.00 1.00 0.50	Very limited Cutbanks cave Slope Too clayey	1.00 1.00 0.50	Very limited Slope	1.00

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
76: Manila-----	50	Very limited Low strength Shrink-swell Slope Frost action	 1.00 1.00 1.00 0.50	Very limited Slope Too clayey Cutbanks cave	 1.00 0.12 0.10	Very limited Slope	 1.00
Lonigan-----	30	Very limited Slope Frost action	 1.00 0.50	Very limited Cutbanks cave Slope Depth to soft bedrock	 1.00 1.00 0.20	Very limited Slope Depth to bedrock	 1.00 0.20
77: Manila-----	50	Very limited Low strength Shrink-swell Frost action Slope	 1.00 1.00 0.50 0.01	Somewhat limited Too clayey Cutbanks cave Slope	 0.12 0.10 0.01	Somewhat limited Slope	 0.01
Obnot-----	25	Very limited Low strength Shrink-swell Frost action Slope	 1.00 1.00 0.50 0.01	Very limited Cutbanks cave Too clayey Slope	 1.00 0.12 0.01	Very limited Large stones content Slope	 1.00 0.01
78: Manila-----	45	Very limited Low strength Shrink-swell Frost action Slope	 1.00 1.00 0.50 0.01	Somewhat limited Too clayey Cutbanks cave Slope	 0.12 0.10 0.01	Somewhat limited Slope	 0.01
Yago-----	40	Very limited Shrink-swell Low strength Large stones content Frost action Slope	 1.00 1.00 0.98 0.50 0.01	Somewhat limited Large stones content Cutbanks cave Slope	 0.98 0.10 0.01	Very limited Large stones content Slope	 1.00 0.01
79: Manila-----	45	Very limited Low strength Shrink-swell Slope Frost action	 1.00 1.00 1.00 0.50	Very limited Slope Too clayey Cutbanks cave	 1.00 0.12 0.10	Very limited Slope	 1.00
Yago-----	35	Very limited Shrink-swell Slope Low strength Large stones content Frost action	 1.00 1.00 1.00 0.98 0.50	Very limited Slope Large stones content Cutbanks cave	 1.00 0.98 0.10	Very limited Large stones content Slope	 1.00 1.00
80: Mellor-----	50	Very limited Frost action Low strength Shrink-swell	 1.00 1.00 0.50	Somewhat limited Cutbanks cave	 0.10	Very limited Sodium content Salinity	 1.00 0.13

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets	Shallow excavations		Lawns and landscaping		
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
80: Freedom-----	35	Very limited Low strength Shrink-swell Frost action	 1.00 0.50 0.50	Somewhat limited Cutbanks cave	 0.10	Not limited	
81: Neeley-----	90	Somewhat limited Frost action	 0.50	Somewhat limited Cutbanks cave	 0.10	Very limited Sodium content	1.00
82: Northwater-----	35	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 1.00	Very limited Slope	1.00
Povey-----	30	Very limited Slope Frost action Large stones content	 1.00 0.50 0.07	Very limited Slope Cutbanks cave Large stones content	 1.00 1.00 0.07	Very limited Slope Gravel content Large stones content	1.00 0.49 0.11
Pavohroo-----	15	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 1.00	Very limited Slope	1.00
83: Parehat-----	90	Very limited Frost action Flooding Low strength Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Flooding Cutbanks cave	 0.99 0.60 0.10	Very limited Sodium content Flooding	1.00 0.60
84: Parleys-----	80	Very limited Frost action Low strength Shrink-swell	 1.00 1.00 0.50	Somewhat limited Cutbanks cave	 0.10	Not limited	
85: Parleys-----	85	Very limited Frost action Low strength Shrink-swell	 1.00 1.00 0.50	Somewhat limited Cutbanks cave	 0.10	Not limited	
86: Parleys-----	50	Very limited Frost action Low strength Shrink-swell	 1.00 1.00 0.50	Somewhat limited Cutbanks cave	 0.10	Not limited	
Welby-----	35	Somewhat limited Frost action	 0.50	Somewhat limited Cutbanks cave	 0.10	Very limited Sodium content	1.00
87: Parleys-----	60	Very limited Frost action Low strength Shrink-swell Slope	 1.00 1.00 0.50 0.01	Somewhat limited Cutbanks cave Slope	 0.10 0.01	Somewhat limited Slope	0.01

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
87: Wheelon-----	15	Very limited Frost action Low strength Shrink-swell Slope	 1.00 1.00 0.50 0.01	Somewhat limited Cutbanks cave Slope	 0.10 0.01	Very limited Sodium content Slope	 1.00 0.01
88: Pavohroo-----	45	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 1.00	Very limited Slope	 1.00
Povey-----	30	Very limited Slope Frost action Large stones content	 1.00 0.50 0.07	Very limited Slope Cutbanks cave Large stones content	 1.00 1.00 0.07	Very limited Slope Gravel content Large stones content	 1.00 0.49 0.11
89: Pavohroo-----	45	Very limited Slope Frost action	 1.00 0.50	Very limited Cutbanks cave Slope	 1.00 1.00	Very limited Slope	 1.00
Stines-----	30	Very limited Slope Frost action	 1.00 0.50	Very limited Cutbanks cave Slope	 1.00 1.00	Very limited Slope Gravel content Large stones content Droughty	 1.00 0.24 0.08 0.01
Lonigan-----	20	Very limited Slope Frost action	 1.00 0.50	Very limited Cutbanks cave Slope Depth to soft bedrock	 1.00 1.00 0.20	Very limited Slope Depth to bedrock	 1.00 0.20
90: Pits, gravel-----	100	Not rated		Not rated		Not rated	
91: Povey-----	35	Very limited Slope Frost action Large stones content	 1.00 0.50 0.07	Very limited Cutbanks cave Slope Large stones content	 1.00 1.00 0.07	Very limited Slope Gravel content Large stones content	 1.00 0.49 0.11
Hades-----	30	Very limited Low strength Slope Shrink-swell Frost action	 1.00 1.00 0.50 0.50	Very limited Cutbanks cave Slope	 1.00 1.00	Very limited Slope	 1.00
Hondoho-----	25	Very limited Slope Shrink-swell Frost action Large stones content	 1.00 0.50 0.50 0.13	Very limited Slope Large stones content Cutbanks cave	 1.00 0.13 0.10	Very limited Slope Gravel content Large stones content	 1.00 0.09 0.03

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
92: Povey-----	45	Very limited Slope Frost action Large stones content	 1.00 0.50 0.07	Very limited Slope Cutbanks cave Large stones content	 1.00 1.00 0.07	Very limited Slope Gravel content Large stones content	 1.00 0.49 0.11
Ireland-----	25	Very limited Slope Large stones content Depth to hard bedrock Frost action	 1.00 1.00 0.64 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	 1.00 1.00 1.00 0.10	Very limited Slope Droughty Gravel content Depth to bedrock Large stones content	 1.00 0.99 0.84 0.65 0.54
Calpac-----	15	Very limited Slope Large stones content Shrink-swell Frost action	 1.00 0.85 0.50 0.50	Very limited Slope Large stones content Cutbanks cave	 1.00 0.85 0.10	Very limited Slope Gravel content Droughty	 1.00 0.25 0.05
93: Povey-----	45	Very limited Slope Frost action Large stones content	 1.00 0.50 0.07	Very limited Slope Cutbanks cave Large stones content	 1.00 1.00 0.07	Very limited Slope Gravel content Large stones content	 1.00 0.49 0.11
Pavohroo-----	30	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 1.00	Very limited Slope	 1.00
94: Povirt-----	85	Very limited Depth to saturated zone Frost action Low strength Shrink-swell Ponding	 1.00 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Too clayey Cutbanks cave	 1.00 1.00 0.50 0.10	Very limited Depth to saturated zone Sodium content Ponding	 1.00 1.00 1.00
95: Raldridge-----	75	Somewhat limited Frost action Slope	 0.50 0.01	Very limited Cutbanks cave Slope	 1.00 0.01	Somewhat limited Gravel content Slope	 0.08 0.01
96: Rexburg-----	85	Very limited Frost action	 1.00	Somewhat limited Cutbanks cave	 0.50	Not limited	
97: Rexburg-----	50	Very limited Frost action Slope	 1.00 0.01	Somewhat limited Cutbanks cave Slope	 0.50 0.01	Somewhat limited Slope	 0.01
Arbone-----	25	Somewhat limited Frost action Slope	 0.50 0.01	Very limited Cutbanks cave Slope	 1.00 0.01	Somewhat limited Slope	 0.01

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
97: Ririe-----	15	Very limited Frost action Slope	1.00 0.01	Somewhat limited Cutbanks cave Slope	0.10 0.01	Somewhat limited Slope	0.01
98: Rexburg-----	40	Very limited Frost action Slope	1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.50	Very limited Slope	1.00
Arbone-----	35	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope	1.00
Ririe-----	15	Very limited Frost action Slope	1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
99: Rexburg-----	30	Very limited Frost action Slope	1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.50	Very limited Slope	1.00
Iphil-----	25	Very limited Frost action Slope	1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Watercanyon-----	25	Very limited Frost action Slope	1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.50	Very limited Slope	1.00
100: Rexburg-----	55	Very limited Frost action Slope	1.00 0.01	Somewhat limited Cutbanks cave Slope	0.50 0.01	Somewhat limited Slope	0.01
Lanoak-----	35	Very limited Frost action Low strength Slope	1.00 1.00 0.01	Somewhat limited Cutbanks cave Slope	0.10 0.01	Somewhat limited Slope	0.01
101: Rexburg-----	55	Very limited Frost action Slope	1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.50	Very limited Slope	1.00
Lanoak-----	35	Very limited Frost action Slope Low strength	1.00 1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
102: Rexburg-----	35	Very limited Frost action Slope	1.00 0.01	Somewhat limited Cutbanks cave Slope	0.50 0.01	Somewhat limited Slope	0.01
Lanoak-----	25	Very limited Frost action Low strength Slope	1.00 1.00 0.01	Somewhat limited Cutbanks cave Slope	0.10 0.01	Somewhat limited Slope	0.01

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
102: Watercanyon-----	20	Very limited Frost action Slope	1.00 0.01	Somewhat limited Cutbanks cave Slope	0.50 0.01	Somewhat limited Slope	0.01
103: Rexburg-----	50	Very limited Frost action	1.00	Somewhat limited Cutbanks cave	0.50	Not limited	
Ririe-----	20	Very limited Frost action	1.00	Somewhat limited Cutbanks cave	0.10	Not limited	
Kucera-----	15	Very limited Frost action Low strength	1.00 0.78	Somewhat limited Cutbanks cave	0.10	Not limited	
104: Rexburg-----	40	Very limited Frost action Slope	1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.50	Very limited Slope	1.00
Thatcher-----	25	Very limited Frost action Low strength Slope	1.00 1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Ririe-----	20	Very limited Frost action Slope	1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
105: Rexburg-----	35	Very limited Frost action Slope	1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.50	Very limited Slope	1.00
Watercanyon-----	30	Very limited Frost action Slope	1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.50	Very limited Slope	1.00
Lanoak-----	20	Very limited Frost action Slope Low strength	1.00 1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
106: Ridgecrest-----	45	Very limited Slope Large stones content Frost action Depth to hard bedrock	1.00 0.97 0.50 0.10	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	1.00 1.00 0.97 0.10	Very limited Slope Carbonate content Gravel content Large stones content Depth to bedrock	1.00 1.00 0.68 0.68 0.10
Hondoho-----	35	Very limited Slope Shrink-swell Frost action Large stones content	1.00 0.50 0.50 0.13	Very limited Slope Large stones content Cutbanks cave	1.00 0.13 0.10	Very limited Slope Gravel content Large stones content	1.00 0.09 0.03

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
107:							
Ridgecrest-----	35	Very limited Slope Large stones content Frost action Depth to hard bedrock	 1.00 0.97 0.50 0.10	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	 1.00 1.00 0.97 0.10	Very limited Slope Carbonate content Gravel content Large stones content Depth to bedrock	 1.00 1.00 0.68 0.68 0.10
Hondoho-----	30	Very limited Slope Shrink-swell Frost action Large stones content	 1.00 0.50 0.50 0.13	Very limited Slope Large stones content Cutbanks cave	 1.00 0.13 0.10	Very limited Slope Gravel content Large stones content	 1.00 0.09 0.03
Hymas-----	15	Very limited Depth to hard bedrock Slope Large stones content Frost action	 1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	 1.00 1.00 1.00 0.10	Very limited Depth to bedrock Slope Droughty Large stones content Carbonate content	 1.00 1.00 1.00 1.00 1.00
108:							
Ridgecrest-----	35	Very limited Slope Large stones content Frost action Depth to hard bedrock	 1.00 0.97 0.50 0.10	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	 1.00 1.00 0.97 0.10	Very limited Slope Carbonate content Gravel content Large stones content Depth to bedrock	 1.00 1.00 0.68 0.68 0.10
Hondoho-----	30	Very limited Slope Shrink-swell Frost action Large stones content	 1.00 0.50 0.50 0.13	Very limited Slope Large stones content Cutbanks cave	 1.00 0.13 0.10	Very limited Slope Gravel content Large stones content	 1.00 0.09 0.03
Lizdale-----	20	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 1.00	Very limited Slope Gravel content Carbonate content Droughty Large stones content	 1.00 1.00 1.00 0.39 0.08
109:							
Ridgecrest-----	45	Very limited Slope Large stones content Frost action Depth to hard bedrock	 1.00 0.97 0.50 0.10	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	 1.00 1.00 0.97 0.10	Very limited Slope Carbonate content Gravel content Large stones content Depth to bedrock	 1.00 1.00 0.68 0.68 0.10

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
109: Hymas-----	30	Very limited Depth to hard bedrock Slope Large stones content Frost action	 1.00 1.00 1.00 0.50	Very limited Depth to hard bedrock Slope Large stones content Cutbanks cave	 1.00 1.00 1.00 0.10	Very limited Depth to bedrock Slope Droughty Large stones content Carbonate content	 1.00 1.00 1.00 1.00
110: Ririe-----	50	Very limited Frost action Slope	 1.00 0.01	Somewhat limited Cutbanks cave Slope	 0.10 0.01	Somewhat limited Slope	 0.01
Buist-----	25	Somewhat limited Frost action Slope	 0.50 0.01	Very limited Cutbanks cave Slope	 1.00 0.01	Somewhat limited Large stones content Gravel content Slope	 0.08 0.01 0.01
111: Ririe-----	50	Very limited Frost action Slope	 1.00 0.01	Somewhat limited Cutbanks cave Slope	 0.10 0.01	Somewhat limited Slope	 0.01
Cedarhill-----	25	Somewhat limited Frost action Slope	 0.50 0.01	Very limited Cutbanks cave Slope	 1.00 0.01	Somewhat limited Large stones content Droughty Slope	 0.08 0.01 0.01
112: Ririe-----	50	Very limited Frost action Slope	 1.00 1.00	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Cedarhill-----	25	Very limited Slope Frost action	 1.00 0.50	Very limited Cutbanks cave Slope	 1.00 1.00	Very limited Slope Large stones content Droughty	 1.00 0.08 0.01
113: Ririe-----	50	Very limited Frost action Slope	 1.00 1.00	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Hondoho-----	25	Very limited Slope Shrink-swell Frost action Large stones content	 1.00 0.50 0.50 0.13	Very limited Slope Large stones content Cutbanks cave	 1.00 0.13 0.10	Very limited Slope Gravel content Large stones content	 1.00 0.09 0.03
114: Ririe-----	40	Very limited Frost action	 1.00	Somewhat limited Cutbanks cave	 0.10	Not limited	
Iphil-----	25	Very limited Frost action	 1.00	Somewhat limited Cutbanks cave	 0.10	Not limited	

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
114: Kucera-----	20	Very limited Frost action Low strength	1.00 0.78	Somewhat limited Cutbanks cave	0.10	Not limited	
115: Ririe-----	30	Very limited Frost action Slope	1.00 0.01	Somewhat limited Cutbanks cave Slope	0.10 0.01	Somewhat limited Slope	0.01
Iphil-----	25	Very limited Frost action Slope	1.00 0.01	Somewhat limited Cutbanks cave Slope	0.10 0.01	Somewhat limited Slope	0.01
Rexburg-----	25	Very limited Frost action Slope	1.00 0.01	Somewhat limited Cutbanks cave Slope	0.50 0.01	Somewhat limited Slope	0.01
116: Ririe-----	45	Very limited Frost action Slope	1.00 0.01	Somewhat limited Cutbanks cave Slope	0.10 0.01	Somewhat limited Slope	0.01
Rexburg-----	40	Very limited Frost action Slope	1.00 0.01	Somewhat limited Cutbanks cave Slope	0.50 0.01	Somewhat limited Slope	0.01
117: Ririe-----	50	Very limited Frost action Slope	1.00 0.01	Somewhat limited Cutbanks cave Slope	0.10 0.01	Somewhat limited Slope	0.01
Watercanyon-----	25	Very limited Frost action Slope	1.00 0.01	Somewhat limited Cutbanks cave Slope	0.50 0.01	Somewhat limited Slope	0.01
118: Ririe-----	45	Very limited Frost action Slope	1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Watercanyon-----	35	Very limited Frost action Slope	1.00 1.00	Very limited Slope Cutbanks cave	1.00 0.50	Very limited Slope	1.00
119: Samaria-----	90	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Not limited	
120: Samaria-----	90	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Not limited	
121: Samaria-----	55	Somewhat limited Frost action Slope	0.50 0.01	Very limited Cutbanks cave Slope	1.00 0.01	Somewhat limited Slope	0.01
Pollynot-----	30	Somewhat limited Frost action Slope	0.50 0.01	Very limited Cutbanks cave Slope	1.00 0.01	Somewhat limited Slope	0.01

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets	Shallow excavations		Lawns and landscaping		
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
122: Samaria-----	50	Somewhat limited Frost action Slope	 0.50 0.01	Very limited Cutbanks cave Slope	 1.00 0.01	Somewhat limited Slope	 0.01
Sterling-----	35	Somewhat limited Frost action Large stones content Slope	 0.50 0.04 0.01	Very limited Cutbanks cave Large stones content Slope	 1.00 0.04 0.01	Very limited Large stones content Gravel content Droughty Slope	 1.00 0.61 0.16 0.01
123: Sterling-----	80	Very limited Slope Frost action Large stones content	 1.00 0.50 0.04	Very limited Cutbanks cave Slope Large stones content	 1.00 1.00 0.04	Very limited Slope Large stones content Gravel content Droughty	 1.00 1.00 0.61 0.16
124: Thatcher-----	85	Very limited Frost action Low strength Slope	 1.00 1.00 0.01	Somewhat limited Cutbanks cave Slope	 0.10 0.01	Somewhat limited Slope	 0.01
125: Thatcher-----	45	Very limited Frost action Low strength Slope	 1.00 1.00 1.00	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Jensen-----	35	Very limited Slope Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Cutbanks cave Slope	 1.00 1.00	Very limited Slope	 1.00
126: Freedom-----	75	Very limited Low strength Shrink-swell Frost action	 1.00 0.50 0.50	Somewhat limited Cutbanks cave	 0.10	Not limited	
127: Tickason-----	80	Somewhat limited Frost action	 0.50	Somewhat limited Cutbanks cave	 0.10	Not limited	
128: Tickason-----	85	Somewhat limited Frost action	 0.50	Somewhat limited Cutbanks cave	 0.10	Not limited	
129: Tirod-----	85	Very limited Low strength Shrink-swell Frost action	 1.00 0.50 0.50	Somewhat limited Cutbanks cave	 0.10	Not limited	
130: Toefoot-----	90	Somewhat limited Low strength Frost action	 0.78 0.50	Very limited Cutbanks cave	 1.00	Not limited	

Table 9b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
131: Welby-----	65	Somewhat limited Frost action	0.50	Somewhat limited Cutbanks cave	0.10	Very limited Sodium content	1.00
Parleys-----	20	Very limited Frost action Low strength Shrink-swell	1.00 1.00 0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
132: Wursten-----	85	Somewhat limited Frost action Slope	0.50 0.16	Very limited Cutbanks cave Slope	1.00 0.16	Somewhat limited Slope Gravel content Large stones content	0.16 0.11 0.01
133: Yago-----	40	Very limited Slope Shrink-swell Low strength Large stones content Frost action	1.00 1.00 1.00 0.98 0.50	Very limited Slope Large stones content Cutbanks cave	1.00 0.98 0.10	Very limited Slope Large stones content	1.00 1.00
Manila-----	35	Very limited Slope Low strength Shrink-swell Frost action	1.00 1.00 1.00 0.50	Very limited Slope Too clayey Cutbanks cave	1.00 0.12 0.10	Very limited Slope	1.00
134: Water-----	100	Not rated		Not rated		Not rated	

Table 10a.--Sanitary Facilities (Part 1)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1: Araveton-----	50	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
Hades-----	25	Very limited Slow water movement Slope	1.00 0.01	Very limited Slope Seepage	1.00 0.53
2: Arbone-----	75	Somewhat limited Slow water movement	0.46	Somewhat limited Seepage	0.53
3: Arbone-----	90	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
4: Arbone-----	85	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
5: Arbone-----	35	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
Hondoho-----	30	Very limited Seepage Slow water movement Large stones content Slope	1.00 0.46 0.13 0.01	Very limited Seepage Slope	1.00 1.00
Cedarhill-----	20	Very limited Seepage Slow water movement Slope	1.00 0.46 0.01	Very limited Slope Seepage	1.00 1.00
6: Arbone-----	45	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
6: Hondoho-----	25	Very limited Seepage Slope Slow water movement Large stones content	 1.00 1.00 0.46 0.13	Very limited Slope Seepage	 1.00 1.00
Cedarhill-----	20	Very limited Slope Seepage Slow water movement	 1.00 1.00 0.46	Very limited Slope Seepage	 1.00 1.00
7: Bayhook-----	90	Very limited Slow water movement	 1.00	Not limited	
8: Bayhook-----	55	Very limited Slow water movement	 1.00	Not limited	
Ecur-----	35	Not limited		Very limited Seepage	 1.00
9: Bingham-----	90	Very limited Seepage Slow water movement	 1.00 0.46	Very limited Seepage Slope	 1.00 0.08
10: Bingham-----	45	Very limited Seepage Slow water movement	 1.00 0.46	Very limited Seepage	 1.00
Tirod-----	35	Very limited Slow water movement	 1.00	Somewhat limited Seepage	 0.53
11: Bloor-----	50	Very limited Slow water movement Depth to saturated zone	 1.00 0.08	Very limited Seepage	 1.00
Brinum-----	35	Very limited Flooding Depth to saturated zone Slow water movement	 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone	 1.00 1.00

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
12: Bothwell-----	80	Very limited Slow water movement	1.00	Somewhat limited Seepage	0.53
13: Bothwell-----	35	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 0.53
Hades-----	30	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 0.53
Justesen-----	20	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 0.53
14: Brinnum-----	30	Very limited Flooding Depth to saturated zone Slow water movement	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
Logan-----	30	Very limited Depth to saturated zone Slow water movement Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40
Langless-----	25	Very limited Flooding Depth to saturated zone Slow water movement	1.00 1.00 0.46	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 0.53
15: Buckboard-----	80	Very limited Slow water movement	1.00	Somewhat limited Seepage	0.53
16: Buist-----	75	Very limited Slope Seepage Slow water movement	1.00 1.00 0.46	Very limited Slope Seepage	1.00 1.00

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
17: Calpac-----	30	Very limited Slope Large stones content Slow water movement	1.00 0.85 0.46	Very limited Slope Seepage	1.00 0.53
Ridgecrest-----	30	Very limited Depth to bedrock Slope Seepage Large stones content Slow water movement	1.00 1.00 1.00 0.97 0.46	Very limited Depth to hard bedrock Slope Seepage Large stones content	1.00 1.00 1.00 1.00 1.00
Ireland-----	25	Very limited Depth to bedrock Slope Large stones content Slow water movement	1.00 1.00 1.00 0.46	Very limited Depth to hard bedrock Slope Large stones content Seepage	1.00 1.00 1.00 1.00 0.53
18: Cedarhill-----	85	Very limited Seepage Slow water movement Slope	1.00 0.46 0.01	Very limited Slope Seepage	1.00 1.00
19: Cedarhill-----	75	Very limited Slope Seepage Slow water movement	1.00 1.00 0.46	Very limited Slope Seepage	1.00 1.00
20: Cedarhill-----	45	Very limited Slope Seepage Slow water movement	1.00 1.00 0.46	Very limited Slope Seepage	1.00 1.00
Hymas-----	30	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content Seepage	1.00 1.00 1.00 0.94 0.02
21: Cedarhill-----	40	Very limited Slope Seepage Slow water movement	1.00 1.00 0.46	Very limited Slope Seepage	1.00 1.00

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
21: Lostine-----	40	Very limited Seepage Slope Slow water movement	 1.00 1.00 0.46	Very limited Slope Seepage	 1.00 1.00
22: Collinston-----	85	Very limited Slow water movement	1.00	Not limited	
23: Collinston-----	45	Very limited Slow water movement	1.00	Very limited Slope	1.00
Kearns-----	30	Somewhat limited Slow water movement	0.46	Very limited Slope Seepage	1.00 0.53
24: Copenhagen-----	35	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to hard bedrock Slope Seepage	1.00 1.00 0.53
Lonigan-----	30	Very limited Depth to bedrock Seepage Slope	1.00 1.00 1.00	Very limited Depth to soft bedrock Slope Seepage	1.00 1.00 1.00
Manila-----	20	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 0.53
25: Darkbull-----	40	Very limited Slope Slow water movement	1.00 0.46	Very limited Seepage Slope	1.00 1.00
Pyrat-----	30	Very limited Slope Slow water movement	1.00 0.46	Very limited Seepage Slope	1.00 1.00
Ecur-----	25	Very limited Slope	1.00	Very limited Seepage Slope	1.00 1.00
26: DeJarnet-----	90	Very limited Seepage Slow water movement	1.00 0.46	Very limited Seepage	1.00

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
27: Dumps, mine-----	100	Not rated		Not rated	
28: Ecur-----	85	Not limited		Very limited Seepage	1.00
29: Ecur-----	45	Not limited		Very limited Seepage Slope	1.00 0.68
Darkbull-----	30	Somewhat limited Slow water movement	0.46	Very limited Seepage Slope	1.00 0.68
30: Elevator-----	80	Very limited Slow water movement Depth to saturated zone	1.00 0.08	Not limited	
31: Elevator-----	40	Very limited Slow water movement Depth to saturated zone	1.00 0.08	Somewhat limited Slope	0.08
Jensen-----	35	Somewhat limited Slow water movement	0.46	Somewhat limited Seepage Slope	0.53 0.08
32: Elevator-----	40	Very limited Slow water movement Depth to saturated zone Slope	1.00 0.08 0.01	Very limited Slope	1.00
Jensen-----	35	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
33: Fridlo-----	75	Very limited Slow water movement Depth to saturated zone	1.00 0.75	Somewhat limited Depth to saturated zone	0.08
34: Goosenawt-----	75	Very limited Slow water movement Flooding	1.00 0.40	Somewhat limited Seepage Flooding	0.53 0.40

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
35: Hans-----	80	Very limited Slow water movement	1.00	Not limited	
36: Highcreek-----	45	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
Sterling-----	30	Somewhat limited Slow water movement Large stones content Slope	0.46 0.04 0.01	Very limited Slope Large stones content Seepage	1.00 0.90 0.53
37: Highcreek-----	40	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Sterling-----	35	Very limited Slope Slow water movement Large stones content	1.00 0.46 0.04	Very limited Slope Large stones content Seepage	1.00 0.90 0.53
38: Hillfield-----	50	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Kucera-----	30	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
39: Hillfield-----	65	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Kucera-----	20	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
40: Hondoho-----	35	Very limited Slope Seepage Slow water movement Large stones content	1.00 1.00 0.46 0.13	Very limited Slope Seepage	1.00 1.00

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
40: Calpac-----	20	Very limited Slope Large stones content Slow water movement	1.00 0.85 0.46	Very limited Slope Seepage	1.00 0.53
Lizdale-----	20	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage	1.00 1.00
41: Hondoho-----	35	Very limited Seepage Slope Slow water movement Large stones content	1.00 1.00 0.46 0.13	Very limited Slope Seepage	1.00 1.00
Hymas-----	25	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content Seepage	1.00 1.00 0.94 0.02
Pavohroo-----	20	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 0.53
42: Hondoho-----	35	Very limited Slope Seepage Slow water movement Large stones content	1.00 1.00 0.46 0.13	Very limited Slope Seepage	1.00 1.00
Hymas-----	25	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content Seepage	1.00 1.00 0.94 0.02
Pavohroo-----	20	Very limited Slope Slow water movement	1.00 1.00	Very limited Slope Seepage	1.00 0.53

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
43: Hondoho-----	35	Very limited Seepage Slope Slow water movement Large stones content	 1.00 1.00 0.46 0.13	Very limited Slope Seepage	 1.00 1.00
Ridgecrest-----	30	Very limited Depth to bedrock Seepage Slope Large stones content Slow water movement	 1.00 1.00 1.00 0.97 0.46	Very limited Depth to hard bedrock Slope Seepage Large stones content	 1.00 1.00 1.00 1.00
Hades-----	20	Very limited Slow water movement Slope	 1.00 1.00	Very limited Slope Seepage	 1.00 0.53
44: Hutchley-----	30	Very limited Depth to bedrock Slope Large stones content	 1.00 1.00 0.55	Very limited Depth to hard bedrock Slope Large stones content	 1.00 1.00 0.24
McCarey-----	25	Very limited Depth to bedrock Slope	 1.00 1.00	Very limited Depth to hard bedrock Slope	 1.00 1.00
Araveton-----	25	Very limited Slope Slow water movement	 1.00 0.46	Very limited Slope Seepage	 1.00 0.53
45: Hymas-----	35	Very limited Depth to bedrock Slope Large stones content	 1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content Seepage	 1.00 1.00 0.94 0.02
Calpac-----	25	Very limited Slope Large stones content Slow water movement	 1.00 0.85 0.46	Very limited Slope Seepage	 1.00 0.53

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
45: Ireland-----	20	Very limited Depth to bedrock Slope Large stones content Slow water movement	1.00 1.00 1.00 0.46	Very limited Depth to hard bedrock Slope Large stones content Seepage	1.00 1.00 1.00 0.53
46: Hymas-----	30	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content Seepage	1.00 1.00 0.94 0.02
Northwater-----	30	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Clayburn-----	20	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
47: Hymas-----	45	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content Seepage	1.00 1.00 0.94 0.02
Povey-----	30	Very limited Slope Seepage Slow water movement Large stones content	1.00 1.00 0.46 0.07	Very limited Slope Seepage Large stones content	1.00 1.00 0.69
48: Hymas-----	35	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content Seepage	1.00 1.00 0.94 0.02
Povey-----	25	Very limited Slope Seepage Slow water movement Large stones content	1.00 1.00 0.46 0.07	Very limited Slope Seepage Large stones content	1.00 1.00 0.69

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
48: Pavohroo-----	20	Very limited Slope Slow water movement	1.00 1.00	Very limited Slope Seepage	1.00 0.53
49: Inkom-----	85	Very limited Flooding Depth to saturated zone Slow water movement	1.00 1.00 0.46	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 0.53
50: Iphil-----	50	Somewhat limited Slope Slow water movement	0.96 0.46	Very limited Slope Seepage	1.00 0.53
Ririe-----	20	Somewhat limited Slope Slow water movement	0.96 0.46	Very limited Slope Seepage	1.00 0.53
Watercanyon-----	15	Somewhat limited Slow water movement Slope	0.46 0.16	Very limited Slope Seepage	1.00 0.53
51: Ireland-----	40	Very limited Depth to bedrock Slope Large stones content Slow water movement	1.00 1.00 1.00 0.46	Very limited Depth to hard bedrock Slope Large stones content Seepage	1.00 1.00 1.00 0.53
Calpac-----	35	Very limited Slope Large stones content Slow water movement	1.00 0.85 0.46	Very limited Slope Seepage	1.00 0.53
52: Jensen-----	80	Somewhat limited Slow water movement	0.46	Somewhat limited Seepage	0.53
53: Jensen-----	80	Somewhat limited Slow water movement	0.46	Somewhat limited Seepage Slope	0.53 0.32
54: Jensen-----	30	Somewhat limited Slow water movement Slope	0.46 0.16	Very limited Slope Seepage	1.00 0.53

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
54: Iphil-----	25	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
Wursten-----	25	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
55: Jovine-----	80	Somewhat limited Slow water movement Flooding Depth to saturated zone	0.46 0.40 0.08	Somewhat limited Seepage Flooding	0.53 0.40
56: Justesen-----	75	Very limited Slow water movement Slope	1.00 0.01	Very limited Slope Seepage	1.00 0.53
57: Justesen-----	75	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 0.53
58: Justesen-----	50	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 0.53
Ririe-----	30	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Buist-----	15	Very limited Slope Seepage Slow water movement	1.00 1.00 0.46	Very limited Slope Seepage	1.00 1.00
59: Kearns-----	80	Somewhat limited Slow water movement	0.46	Somewhat limited Seepage	0.53
60: Kearns-----	75	Somewhat limited Slow water movement	0.46	Somewhat limited Seepage Slope	0.53 0.08

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
61: Kidman-----	90	Very limited Seepage	1.00	Very limited Seepage Slope	1.00 0.08
62: Kidman-----	60	Very limited Seepage	1.00	Very limited Seepage Slope	1.00 0.32
Preston-----	25	Very limited Filtering capacity Seepage	1.00 1.00	Very limited Seepage Slope	1.00 1.00
63: Kucera-----	85	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
64: Lagonot-----	90	Very limited Depth to saturated zone Slow water movement Flooding	1.00 0.46 0.40	Very limited Depth to saturated zone Seepage Flooding	1.00 0.53 0.40
65: Langless-----	85	Very limited Flooding Depth to saturated zone Slow water movement	1.00 1.00 0.46	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 0.53
66: Langless-----	55	Very limited Flooding Depth to saturated zone Slow water movement	1.00 1.00 0.46	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 0.53
Logan-----	30	Very limited Depth to saturated zone Slow water movement Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40
67: Lanoak-----	90	Somewhat limited Slow water movement	0.46	Somewhat limited Seepage	0.53

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
68: Lanoak-----	90	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
69: Lanoak-----	45	Somewhat limited Slope Slow water movement	0.84 0.46	Very limited Slope Seepage	1.00 0.53
Hondoho-----	35	Very limited Slope Slow water movement Large stones content	1.00 0.46 0.13	Very limited Slope Seepage	1.00 0.53
70: Logan-----	95	Very limited Depth to saturated zone Slow water movement Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40
71: Lonigan-----	45	Very limited Depth to bedrock Seepage Slope	1.00 1.00 1.00	Very limited Depth to soft bedrock Slope Seepage	1.00 1.00 1.00
Lizdale-----	35	Very limited Seepage Slope	1.00 1.00	Very limited Seepage Slope	1.00 1.00
72: Lostine-----	75	Very limited Slope Seepage Slow water movement	1.00 1.00 0.46	Very limited Slope Seepage	1.00 1.00
73: Manila-----	85	Very limited Slow water movement Slope	1.00 0.01	Very limited Slope Seepage	1.00 0.53
74: Manila-----	45	Very limited Slow water movement Slope	1.00 0.01	Very limited Slope Seepage	1.00 0.53
Broadhead-----	30	Very limited Slow water movement Slope	1.00 0.01	Very limited Slope	1.00

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
75: Manila-----	45	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 0.53
Broadhead-----	30	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope	1.00
76: Manila-----	50	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 0.53
Lonigan-----	30	Very limited Depth to bedrock Seepage Slope	1.00 1.00 1.00	Very limited Depth to soft bedrock Seepage Slope	1.00 1.00 1.00
77: Manila-----	50	Very limited Slow water movement Slope	1.00 0.01	Very limited Slope Seepage	1.00 0.53
Obnot-----	25	Very limited Slow water movement Slope	1.00 0.01	Very limited Slope	1.00
78: Manila-----	45	Very limited Slow water movement Slope	1.00 0.01	Very limited Slope Seepage	1.00 0.53
Yago-----	40	Very limited Slow water movement Large stones content Slope	1.00 0.98 0.01	Very limited Large stones content Slope	1.00 1.00
79: Manila-----	45	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 0.53
Yago-----	35	Very limited Slow water movement Slope Large stones content	1.00 1.00 0.98	Very limited Slope Large stones content	1.00 1.00

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
80: Mellor-----	50	Very limited Slow water movement	1.00	Not limited	
Freedom-----	35	Somewhat limited Slow water movement	0.46	Somewhat limited Seepage	0.53
81: Neeley-----	90	Somewhat limited Slow water movement	0.46	Somewhat limited Seepage	0.53
82: Northwater-----	35	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Povey-----	30	Very limited Slope Seepage Slow water movement Large stones content	1.00 1.00 0.46 0.07	Very limited Slope Seepage Large stones content	1.00 1.00 0.69
Pavohroo-----	15	Very limited Slope Slow water movement	1.00 1.00	Very limited Slope Seepage	1.00 0.53
83: Parehat-----	90	Very limited Flooding Depth to saturated zone Slow water movement	1.00 1.00 0.46	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 0.53
84: Parleys-----	80	Very limited Slow water movement	1.00	Somewhat limited Seepage	0.53
85: Parleys-----	85	Very limited Slow water movement	1.00	Somewhat limited Seepage Slope	0.53 0.08
86: Parleys-----	50	Very limited Slow water movement	1.00	Very limited Slope Seepage	1.00 0.53
Welby-----	35	Very limited Seepage Slow water movement	1.00 0.46	Very limited Seepage Slope	1.00 1.00

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
87: Parleys-----	60	Very limited Slow water movement Slope	1.00 0.01	Very limited Slope Seepage	1.00 0.53
Wheelon-----	15	Very limited Slow water movement Slope	1.00 0.01	Very limited Slope	1.00
88: Pavohroo-----	45	Very limited Slope Slow water movement	1.00 1.00	Very limited Slope Seepage	1.00 0.53
Povey-----	30	Very limited Slope Seepage Slow water movement Large stones content	1.00 1.00 0.46 0.07	Very limited Slope Seepage Large stones content	1.00 1.00 0.69
89: Pavohroo-----	45	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 0.53
Stines-----	30	Very limited Seepage Slope	1.00 1.00	Very limited Slope Seepage	1.00 1.00
Lonigan-----	20	Very limited Depth to bedrock Seepage Slope	1.00 1.00 1.00	Very limited Depth to soft bedrock Slope Seepage	1.00 1.00 1.00
90: Pits, gravel-----	100	Not rated		Not rated	
91: Povey-----	35	Very limited Seepage Slope Slow water movement Large stones content	1.00 1.00 0.46 0.07	Very limited Slope Seepage Large stones content	1.00 1.00 0.69
Hades-----	30	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 0.53

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
91: Hondoho-----	25	Very limited Seepage Slope Slow water movement Large stones content	 1.00 1.00 0.46 0.13	Very limited Slope Seepage	 1.00 1.00
92: Povey-----	45	Very limited Slope Seepage Slow water movement Large stones content	 1.00 1.00 0.46 0.07	Very limited Slope Seepage Large stones content	 1.00 1.00 0.69
Ireland-----	25	Very limited Depth to bedrock Slope Large stones content Slow water movement	 1.00 1.00 1.00 0.46	Very limited Depth to hard bedrock Slope Large stones content Seepage	 1.00 1.00 1.00 0.53
Calpac-----	15	Very limited Slope Large stones content Slow water movement	 1.00 0.85 0.46	Very limited Slope Seepage	 1.00 0.53
93: Povey-----	45	Very limited Slope Seepage Slow water movement Large stones content	 1.00 1.00 0.46 0.07	Very limited Slope Seepage Large stones content	 1.00 1.00 0.69
Pavohroo-----	30	Very limited Slope Slow water movement	 1.00 1.00	Very limited Slope Seepage	 1.00 0.53
94: Povirt-----	85	Very limited Slow water movement Depth to saturated zone Ponding Flooding	 1.00 1.00 1.00 0.40	Very limited Depth to saturated zone Ponding Flooding	 1.00 1.00 0.40
95: Raldridge-----	75	Very limited Seepage Slope	 1.00 0.01	Very limited Seepage Slope	 1.00 1.00

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
96: Rexburg-----	85	Somewhat limited Slow water movement	0.46	Somewhat limited Seepage Slope	0.53 0.08
97: Rexburg-----	50	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
Arbone-----	25	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
Ririe-----	15	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
98: Rexburg-----	40	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Arbone-----	35	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Ririe-----	15	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
99: Rexburg-----	30	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Iphil-----	25	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Watercanyon-----	25	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
100: Rexburg-----	55	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
100: Lanoak-----	35	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
101: Rexburg-----	55	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Lanoak-----	35	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
102: Rexburg-----	35	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
Lanoak-----	25	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
Watercanyon-----	20	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
103: Rexburg-----	50	Somewhat limited Slow water movement	0.46	Somewhat limited Slope Seepage	0.68 0.53
Ririe-----	20	Somewhat limited Slow water movement	0.46	Somewhat limited Slope Seepage	0.68 0.53
Kucera-----	15	Somewhat limited Slow water movement	0.46	Somewhat limited Slope Seepage	0.68 0.53
104: Rexburg-----	40	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Thatcher-----	25	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 0.53

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
104: Ririe-----	20	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
105: Rexburg-----	35	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Watercanyon-----	30	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Lanoak-----	20	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
106: Ridgecrest-----	45	Very limited Depth to bedrock Slope Seepage Large stones content Slow water movement	1.00 1.00 1.00 0.97 0.46	Very limited Depth to hard bedrock Slope Seepage Large stones content	1.00 1.00 1.00 1.00 1.00
Hondoho-----	35	Very limited Slope Seepage Slow water movement Large stones content	1.00 1.00 0.46 0.13	Very limited Slope Seepage	1.00 1.00
107: Ridgecrest-----	35	Very limited Depth to bedrock Slope Seepage Large stones content Slow water movement	1.00 1.00 1.00 0.97 0.46	Very limited Depth to hard bedrock Slope Seepage Large stones content	1.00 1.00 1.00 1.00 1.00
Hondoho-----	30	Very limited Slope Seepage Slow water movement Large stones content	1.00 1.00 0.46 0.13	Very limited Slope Seepage	1.00 1.00

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
107: Hymas-----	15	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content Seepage	1.00 1.00 0.94 0.02
108: Ridgecrest-----	35	Very limited Depth to bedrock Slope Seepage Large stones content Slow water movement	1.00 1.00 1.00 0.97 0.46	Very limited Depth to hard bedrock Slope Seepage Large stones content	1.00 1.00 1.00 1.00 1.00
Hondoho-----	30	Very limited Slope Seepage Slow water movement Large stones content	1.00 1.00 0.46 0.13	Very limited Slope Seepage	1.00 1.00
Lizdale-----	20	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage	1.00 1.00
109: Ridgecrest-----	45	Very limited Depth to bedrock Slope Seepage Large stones content Slow water movement	1.00 1.00 1.00 0.97 0.46	Very limited Depth to hard bedrock Slope Seepage Large stones content	1.00 1.00 1.00 1.00 1.00
Hymas-----	30	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 1.00	Very limited Depth to hard bedrock Slope Large stones content Seepage	1.00 1.00 0.94 0.02
110: Ririe-----	50	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
Buist-----	25	Very limited Seepage Slow water movement Slope	1.00 0.46 0.01	Very limited Slope Seepage	1.00 1.00

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
111: Ririe-----	50	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
Cedarhill-----	25	Very limited Seepage Slow water movement Slope	1.00 0.46 0.01	Very limited Slope Seepage	1.00 1.00
112: Ririe-----	50	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Cedarhill-----	25	Very limited Slope Seepage Slow water movement	1.00 1.00 0.46	Very limited Slope Seepage	1.00 1.00
113: Ririe-----	50	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Hondoho-----	25	Very limited Seepage Slope Slow water movement Large stones content	1.00 1.00 0.46 0.13	Very limited Slope Seepage	1.00 1.00
114: Ririe-----	40	Somewhat limited Slow water movement	0.46	Somewhat limited Slope Seepage	0.68 0.53
Iphil-----	25	Somewhat limited Slow water movement	0.46	Somewhat limited Slope Seepage	0.68 0.53
Kucera-----	20	Somewhat limited Slow water movement	0.46	Somewhat limited Slope Seepage	0.68 0.53
115: Ririe-----	30	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
115: Iphil-----	25	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
Rexburg-----	25	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
116: Ririe-----	45	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
Rexburg-----	40	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
117: Ririe-----	50	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
Watercanyon-----	25	Somewhat limited Slow water movement Slope	0.46 0.01	Very limited Slope Seepage	1.00 0.53
118: Ririe-----	45	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Watercanyon-----	35	Very limited Slope Slow water movement	1.00 0.46	Very limited Slope Seepage	1.00 0.53
119: Samaria-----	90	Very limited Seepage Slow water movement	1.00 0.46	Very limited Seepage	1.00
120: Samaria-----	90	Very limited Seepage Slow water movement	1.00 0.46	Very limited Seepage Slope	1.00 0.92

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
121: Samaria-----	55	Very limited Seepage Slow water movement Slope	 1.00 0.46 0.01	Very limited Seepage Slope	 1.00 1.00
Pollynot-----	30	Somewhat limited Slow water movement Slope	 0.75 0.01	Very limited Seepage Slope	 1.00 1.00
122: Samaria-----	50	Very limited Seepage Slow water movement Slope	 1.00 0.46 0.01	Very limited Seepage Slope	 1.00 1.00
Sterling-----	35	Somewhat limited Slow water movement Large stones content Slope	 0.46 0.04 0.01	Very limited Slope Large stones content Seepage	 1.00 0.90 0.53
123: Sterling-----	80	Very limited Slope Slow water movement Large stones content	 1.00 0.46 0.04	Very limited Slope Large stones content Seepage	 1.00 0.90 0.53
124: Thatcher-----	85	Very limited Slow water movement Slope	 1.00 0.01	Very limited Slope Seepage	 1.00 0.53
125: Thatcher-----	45	Very limited Slow water movement Slope	 1.00 1.00	Very limited Slope Seepage	 1.00 0.53
Jensen-----	35	Very limited Slope Slow water movement	 1.00 0.46	Very limited Slope Seepage	 1.00 0.53
126: Freedom-----	75	Somewhat limited Slow water movement	 0.46	Somewhat limited Seepage	 0.53
127: Tickason-----	80	Somewhat limited Slow water movement	 0.46	Somewhat limited Seepage	 0.53

Table 10a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
128: Tickason-----	85	Somewhat limited Slow water movement	0.46	Somewhat limited Seepage Slope	0.53 0.08
129: Tirod-----	85	Very limited Slow water movement	1.00	Somewhat limited Seepage	0.53
130: Toefoot-----	90	Somewhat limited Slow water movement	0.46	Very limited Seepage	1.00
131: Welby-----	65	Very limited Seepage Slow water movement	1.00 0.46	Very limited Seepage	1.00
Parleys-----	20	Very limited Slow water movement	1.00	Somewhat limited Seepage	0.53
132: Wursten-----	85	Somewhat limited Slow water movement Slope	0.46 0.16	Very limited Slope Seepage	1.00 0.53
133: Yago-----	40	Very limited Slow water movement Slope Large stones content	1.00 1.00 0.98	Very limited Slope Large stones content	1.00 1.00
Manila-----	35	Very limited Slow water movement Slope	1.00 1.00	Very limited Slope Seepage	1.00 0.53
134: Water-----	100	Not rated		Not rated	

Table 10b.--Sanitary Facilities (Part 2)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1: Araveton-----	50	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01
Hades-----	25	Somewhat limited Too clayey Slope	0.50 0.01	Somewhat limited Slope	0.01	Somewhat limited Too clayey Slope	0.50 0.01
2: Arbone-----	75	Not limited		Not limited		Somewhat limited Gravel content	0.06
3: Arbone-----	90	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Gravel content Slope	0.06 0.01
4: Arbone-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.06
5: Arbone-----	35	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Gravel content Slope	0.06 0.01
Hondoho-----	30	Very limited Seepage Large stones content Slope	1.00 0.52 0.01	Very limited Seepage Slope	1.00 0.01	Somewhat limited Large stones content Seepage Slope	0.52 0.52 0.01
Cedarhill-----	20	Very limited Seepage Large stones content Slope	1.00 0.16 0.01	Very limited Seepage Slope	1.00 0.01	Somewhat limited Gravel content Seepage Large stones content Slope	0.46 0.21 0.16 0.01
6: Arbone-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.12
Hondoho-----	25	Very limited Seepage Slope Large stones content	1.00 1.00 0.52	Very limited Seepage Slope	1.00 1.00	Very limited Slope Large stones content Seepage	1.00 0.52 0.52

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
6: Cedarhill-----	20	Very limited Slope Seepage Large stones content	 1.00 1.00 0.16	Very limited Slope Seepage	 1.00 1.00	Very limited Slope Gravel content Seepage Large stones content	 1.00 0.46 0.21 0.16
7: Bayhook-----	90	Not limited		Not limited		Not limited	
8: Bayhook-----	55	Not limited		Not limited		Not limited	
Ecur-----	35	Not limited		Not limited		Somewhat limited Seepage	 0.52
9: Bingham-----	90	Very limited Seepage Too sandy	 1.00 0.50	Very limited Seepage	 1.00	Very limited Seepage Gravel content Too sandy	 1.00 0.97 0.50
10: Bingham-----	45	Very limited Seepage Too sandy	 1.00 0.50	Very limited Seepage	 1.00	Very limited Seepage Gravel content Too sandy	 1.00 0.97 0.50
Tirod-----	35	Not limited		Not limited		Not limited	
11: Bloor-----	50	Very limited Depth to saturated zone Excess salt	 1.00 1.00	Very limited Depth to saturated zone	 1.00	Somewhat limited Seepage	 0.52
Brinnum-----	35	Very limited Flooding Depth to saturated zone Excess sodium Excess salt Too clayey	 1.00 1.00 1.00 1.00 0.50	Very limited Flooding Depth to saturated zone	 1.00 1.00	Very limited Depth to saturated zone Sodium content Salinity Too clayey	 1.00 1.00 1.00 0.50
12: Bothwell-----	80	Somewhat limited Too clayey	 0.50	Not limited		Somewhat limited Too clayey	 0.50
13: Bothwell-----	35	Very limited Slope Too clayey	 1.00 0.50	Very limited Slope	 1.00	Very limited Slope Too clayey	 1.00 0.50
Hades-----	30	Very limited Slope Too clayey	 1.00 0.50	Very limited Slope	 1.00	Very limited Slope Too clayey	 1.00 0.50
Justesen-----	20	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope	 1.00

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
14: Brinnum-----	30	Very limited Flooding Depth to saturated zone Excess sodium Excess salt Too clayey	 1.00 1.00 1.00 1.00 0.50	Very limited Flooding Depth to saturated zone	 1.00 1.00 1.00	Very limited Depth to saturated zone Sodium content Salinity Too clayey	 1.00 1.00 0.50
Logan-----	30	Very limited Depth to saturated zone Flooding	 1.00 0.40	Very limited Depth to saturated zone Flooding	 1.00 0.40	Very limited Depth to saturated zone	 1.00
Langless-----	25	Very limited Flooding Depth to saturated zone	 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone	 1.00 1.00 1.00	Very limited Depth to saturated zone Carbonate content	 1.00 1.00
15: Buckboard-----	80	Not limited		Not limited		Not limited	
16: Buist-----	75	Very limited Slope Seepage	 1.00 1.00	Very limited Slope Seepage	 1.00 1.00	Very limited Slope Gravel content Seepage	 1.00 1.00 0.22
17: Calpac-----	30	Very limited Slope Large stones	 1.00 1.00	Very limited Slope	 1.00	Very limited Slope Large stones Gravel content	 1.00 1.00 0.02
Ridgecrest-----	30	Very limited Slope Depth to bedrock Seepage Large stones content	 1.00 1.00 1.00 0.97	Very limited Slope Seepage Depth to bedrock	 1.00 1.00 1.00	Very limited Depth to bedrock Slope Large stones content	 1.00 1.00 0.97
Ireland-----	25	Very limited Slope Depth to bedrock Large stones	 1.00 1.00 1.00	Very limited Slope Depth to bedrock	 1.00 1.00	Very limited Depth to bedrock Slope Large stones	 1.00 1.00 1.00
18: Cedarhill-----	85	Very limited Seepage Large stones content Slope	 1.00 0.16 0.01	Very limited Seepage Slope	 1.00 0.01	Somewhat limited Gravel content Seepage Large stones content Slope	 0.46 0.21 0.16 0.01
19: Cedarhill-----	75	Very limited Slope Seepage Large stones content	 1.00 1.00 0.16	Very limited Slope Seepage	 1.00 1.00	Very limited Slope Gravel content Seepage Large stones content	 1.00 0.46 0.21 0.16

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
20: Cedarhill-----	45	Very limited Slope Seepage Large stones content	 1.00 1.00 0.16	Very limited Slope Seepage	 1.00 1.00	Very limited Slope Gravel content Seepage Large stones content	 1.00 0.46 0.21 0.16
Hymas-----	30	Very limited Slope Depth to bedrock Large stones	 1.00 1.00 1.00	Very limited Slope Depth to bedrock	 1.00 1.00	Very limited Depth to bedrock Slope Large stones Carbonate content	 1.00 1.00 1.00 1.00
21: Cedarhill-----	40	Very limited Slope Seepage Large stones content	 1.00 1.00 0.16	Very limited Slope Seepage	 1.00 1.00	Very limited Slope Gravel content Seepage Large stones content	 1.00 0.46 0.21 0.16
Lostine-----	40	Very limited Seepage Slope	 1.00 1.00	Very limited Slope	 1.00	Very limited Slope	 1.00
22: Collinston-----	85	Not limited		Not limited		Not limited	
23: Collinston-----	45	Not limited		Not limited		Not limited	
Kearns-----	30	Not limited		Not limited		Not limited	
24: Copenhagen-----	35	Very limited Depth to bedrock Slope	 1.00 1.00	Very limited Depth to bedrock Slope	 1.00 1.00	Very limited Depth to bedrock Gravel content Slope	 1.00 1.00 1.00
Lonigan-----	30	Very limited Depth to bedrock Seepage Slope	 1.00 1.00 1.00	Very limited Seepage Depth to bedrock Slope	 1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content	 1.00 1.00 0.52 0.35
Manila-----	20	Very limited Too clayey Slope	 1.00 1.00	Very limited Slope	 1.00	Very limited Too clayey Hard to compact Slope	 1.00 1.00 1.00
25: Darkbull-----	40	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Gravel content Slope	 1.00 1.00
Pyrat-----	30	Very limited Slope Too sandy	 1.00 0.50	Very limited Slope	 1.00	Very limited Seepage Gravel content Slope Too sandy	 1.00 1.00 1.00 0.50

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
25: Ecur-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Seepage	1.00 0.52
26: DeJarnet-----	90	Very limited Seepage Too sandy	1.00 0.50	Not limited		Very limited Gravel content Seepage Too sandy	1.00 0.52 0.50
27: Dumps, mine-----	100	Not rated		Not rated		Not rated	
28: Ecur-----	85	Not limited		Not limited		Somewhat limited Seepage	0.52
29: Ecur-----	45	Not limited		Not limited		Somewhat limited Seepage	0.52
Darkbull-----	30	Not limited		Not limited		Very limited Gravel content	1.00
30: Elevator-----	80	Very limited Depth to saturated zone Too clayey	1.00 0.50	Very limited Depth to saturated zone	1.00	Somewhat limited Too clayey	0.50
31: Elevator-----	40	Very limited Depth to saturated zone Too clayey	1.00 0.50	Very limited Depth to saturated zone	1.00	Somewhat limited Too clayey	0.50
Jensen-----	35	Not limited		Not limited		Somewhat limited Gravel content	0.16
32: Elevator-----	40	Very limited Depth to saturated zone Too clayey Slope	1.00 0.50 0.01	Very limited Depth to saturated zone Slope	1.00 0.01	Somewhat limited Too clayey Slope	0.50 0.01
Jensen-----	35	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Gravel content Slope	0.16 0.01
33: Fridlo-----	75	Very limited Depth to saturated zone Excess sodium	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Sodium content	1.00
34: Goosenawt-----	75	Somewhat limited Too clayey Flooding	0.50 0.40	Somewhat limited Flooding	0.40	Somewhat limited Too clayey	0.50

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
35: Hans-----	80	Somewhat limited Too clayey	0.50	Not limited		Somewhat limited Too clayey	0.50
36: Highcreek-----	45	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01
Sterling-----	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.01	Slope	0.01	Gravel content	0.97
		Slope	0.01			Large stones content	0.01
37: Highcreek-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Sterling-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Large stones content	0.01			Gravel content	0.97
						Large stones content	0.01
38: Hillfield-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Kucera-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
39: Hillfield-----	65	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Kucera-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
40: Hondoho-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Seepage	1.00	Seepage	1.00	Large stones content	0.52
		Large stones content	0.52			Seepage	0.52
Calpac-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Large stones	1.00			Large stones	1.00
						Gravel content	0.02
Lizdale-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	1.00
						Gravel content	1.00
						Carbonate content	1.00

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
41: Hondoho-----	35	Very limited Seepage Slope Large stones content	 1.00 1.00 0.52	Very limited Seepage Slope	 1.00 1.00	Very limited Slope Large stones content Seepage	 1.00 0.52 0.52
Hymas-----	25	Very limited Depth to bedrock Slope Large stones	 1.00 1.00 1.00	Very limited Depth to bedrock Slope	 1.00 1.00	Very limited Depth to bedrock Slope Large stones Carbonate content	 1.00 1.00 1.00 1.00
Pavohroo-----	20	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Gravel content	 1.00 0.03
42: Hondoho-----	35	Very limited Slope Seepage Large stones content	 1.00 1.00 0.52	Very limited Slope Seepage	 1.00 1.00	Very limited Slope Large stones content Seepage	 1.00 0.52 0.52
Hymas-----	25	Very limited Slope Depth to bedrock Large stones	 1.00 1.00 1.00	Very limited Slope Depth to bedrock	 1.00 1.00	Very limited Depth to bedrock Slope Large stones Carbonate content	 1.00 1.00 1.00 1.00
Pavohroo-----	20	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Gravel content	 1.00 0.03
43: Hondoho-----	35	Very limited Seepage Slope Large stones content	 1.00 1.00 0.52	Very limited Seepage Slope	 1.00 1.00	Very limited Slope Large stones content Seepage	 1.00 0.52 0.52
Ridgecrest-----	30	Very limited Depth to bedrock Seepage Slope Large stones content	 1.00 1.00 1.00 0.97	Very limited Seepage Depth to bedrock Slope	 1.00 1.00 1.00	Very limited Depth to bedrock Slope Large stones content	 1.00 1.00 0.97
Hades-----	20	Very limited Slope Too clayey	 1.00 0.50	Very limited Slope	 1.00	Very limited Slope Too clayey	 1.00 0.50
44: Hutchley-----	30	Very limited Depth to bedrock Slope Large stones content Too clayey	 1.00 1.00 0.55 0.50	Very limited Depth to bedrock Slope	 1.00 1.00	Very limited Depth to bedrock Slope Large stones content Too clayey	 1.00 1.00 0.55 0.50

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
44: McCarey-----	25	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to bedrock Slope	1.00 1.00
Araveton-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
45: Hymas-----	35	Very limited Slope Depth to bedrock Large stones	1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Slope Large stones Carbonate content	1.00 1.00 1.00 1.00
Calpac-----	25	Very limited Slope Large stones	1.00 1.00	Very limited Slope	1.00	Very limited Slope Large stones Gravel content	1.00 1.00 0.02
Ireland-----	20	Very limited Slope Depth to bedrock Large stones	1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Slope Large stones	1.00 1.00 1.00
46: Hymas-----	30	Very limited Slope Depth to bedrock Large stones	1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Slope Large stones Carbonate content	1.00 1.00 1.00 1.00
Northwater-----	30	Very limited Slope Too clayey	1.00 0.50	Very limited Slope	1.00	Very limited Slope Gravel content Too clayey	1.00 0.70 0.50
Clayburn-----	20	Very limited Slope Too clayey	1.00 0.50	Very limited Slope	1.00	Very limited Slope Too clayey	1.00 0.50
47: Hymas-----	45	Very limited Slope Depth to bedrock Large stones	1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Slope Large stones Carbonate content	1.00 1.00 1.00 1.00
Povey-----	30	Very limited Slope Seepage Large stones content	1.00 1.00 0.07	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content Seepage Large stones content	1.00 0.76 0.52 0.07
48: Hymas-----	35	Very limited Slope Depth to bedrock Large stones	1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Slope Large stones Carbonate content	1.00 1.00 1.00 1.00

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
48: Povey-----	25	Very limited Slope Seepage Large stones content	1.00 1.00 0.07	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content Seepage Large stones content	1.00 0.76 0.52 0.07
Pavohroo-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.03
49: Inkom-----	85	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00
50: Iphil-----	50	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96
Ririe-----	20	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96
Watercanyon-----	15	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16
51: Ireland-----	40	Very limited Slope Depth to bedrock Large stones	1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Slope Large stones	1.00 1.00 1.00
Calpac-----	35	Very limited Slope Large stones	1.00 1.00	Very limited Slope	1.00	Very limited Slope Large stones Gravel content	1.00 1.00 0.02
52: Jensen-----	80	Not limited		Not limited		Somewhat limited Gravel content	0.16
53: Jensen-----	80	Not limited		Not limited		Somewhat limited Gravel content	0.16
54: Jensen-----	30	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Somewhat limited Slope Gravel content	0.16 0.16
Iphil-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01
Wursten-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Gravel content Slope	0.15 0.01

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
55: Jovine-----	80	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Not limited	
56: Justesen-----	75	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01
57: Justesen-----	75	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
58: Justesen-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Ririe-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Buist-----	15	Very limited Slope Seepage	1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Gravel content Slope Seepage	1.00 1.00 0.22
59: Kearns-----	80	Not limited		Not limited		Not limited	
60: Kearns-----	75	Not limited		Not limited		Not limited	
61: Kidman-----	90	Very limited Seepage	1.00	Very limited Seepage	1.00	Somewhat limited Seepage	0.52
62: Kidman-----	60	Very limited Seepage	1.00	Very limited Seepage	1.00	Somewhat limited Seepage	0.52
Preston-----	25	Very limited Seepage Too sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Too sandy Seepage	1.00 1.00
63: Kucera-----	85	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01
64: Lagonot-----	90	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Somewhat limited Depth to saturated zone	0.44
65: Langless-----	85	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Carbonate content	1.00 1.00

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
66: Langless-----	55	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Carbonate content	1.00 1.00
Logan-----	30	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone	1.00
67: Lanoak-----	90	Not limited		Not limited		Not limited	
68: Lanoak-----	90	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
69: Lanoak-----	45	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84	Somewhat limited Slope	0.84
Hondoho-----	35	Very limited Slope Large stones content	1.00 0.52	Very limited Slope	1.00	Very limited Slope Large stones content	1.00 0.52
70: Logan-----	95	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone	1.00
71: Lonigan-----	45	Very limited Depth to bedrock Seepage Slope	1.00 1.00 1.00	Very limited Seepage Depth to bedrock Slope	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content	1.00 1.00 0.52 0.35
Lizdale-----	35	Very limited Seepage Slope	1.00 1.00	Very limited Seepage Slope	1.00 1.00	Very limited Seepage Gravel content Slope Carbonate content	1.00 1.00 1.00 1.00
72: Lostine-----	75	Very limited Slope Seepage	1.00 1.00	Very limited Slope	1.00	Very limited Slope	1.00
73: Manila-----	85	Very limited Too clayey Slope	1.00 0.01	Somewhat limited Slope	0.01	Very limited Too clayey Hard to compact Slope	1.00 1.00 0.01

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
74: Manila-----	45	Very limited Too clayey Slope	1.00 0.01	Somewhat limited Slope	0.01	Very limited Too clayey Hard to compact Slope	1.00 1.00 0.01
Broadhead-----	30	Very limited Too clayey Slope	1.00 0.01	Somewhat limited Slope	0.01	Very limited Too clayey Hard to compact Slope	1.00 1.00 0.01
75: Manila-----	45	Very limited Too clayey Slope	1.00 1.00	Very limited Slope	1.00	Very limited Too clayey Hard to compact Slope	1.00 1.00 1.00
Broadhead-----	30	Very limited Too clayey Slope	1.00 1.00	Very limited Slope	1.00	Very limited Too clayey Hard to compact Slope	1.00 1.00 1.00
76: Manila-----	50	Very limited Too clayey Slope	1.00 1.00	Very limited Slope	1.00	Very limited Too clayey Hard to compact Slope	1.00 1.00 1.00
Lonigan-----	30	Very limited Depth to bedrock Seepage Slope	1.00 1.00 1.00	Very limited Seepage Depth to bedrock Slope	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content	1.00 1.00 0.52 0.35
77: Manila-----	50	Very limited Too clayey Slope	1.00 0.01	Somewhat limited Slope	0.01	Very limited Too clayey Hard to compact Slope	1.00 1.00 0.01
Obnot-----	25	Somewhat limited Too clayey Slope	0.50 0.01	Somewhat limited Slope	0.01	Very limited Hard to compact Too clayey Slope	1.00 0.50 0.01
78: Manila-----	45	Very limited Too clayey Slope	1.00 0.01	Somewhat limited Slope	0.01	Very limited Too clayey Hard to compact Slope	1.00 1.00 0.01
Yago-----	40	Somewhat limited Large stones content Too clayey Slope	0.97 0.50 0.01	Somewhat limited Slope	0.01	Somewhat limited Large stones content Too clayey Slope	0.97 0.50 0.01

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
79: Manila-----	45	Very limited Too clayey Slope	1.00 1.00	Very limited Slope	1.00	Very limited Too clayey Hard to compact Slope	1.00 1.00 1.00
Yago-----	35	Very limited Slope Large stones content Too clayey	1.00 0.97 0.50	Very limited Slope	1.00	Very limited Slope Large stones content Too clayey	1.00 0.97 0.50
80: Mellor-----	50	Not limited		Not limited		Not limited	
Freedom-----	35	Not limited		Not limited		Not limited	
81: Neeley-----	90	Very limited Excess sodium	1.00	Not limited		Very limited Sodium content	1.00
82: Northwater-----	35	Very limited Slope Too clayey	1.00 0.50	Very limited Slope	1.00	Very limited Slope Gravel content Too clayey	1.00 0.70 0.50
Povey-----	30	Very limited Slope Seepage Large stones content	1.00 1.00 0.07	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content Seepage Large stones content	1.00 0.76 0.52 0.07
Pavohroo-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.03
83: Parehat-----	90	Very limited Flooding Depth to saturated zone Excess sodium	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Sodium content Depth to saturated zone	1.00 0.47
84: Parleys-----	80	Not limited		Not limited		Not limited	
85: Parleys-----	85	Not limited		Not limited		Not limited	
86: Parleys-----	50	Not limited		Not limited		Not limited	
Welby-----	35	Very limited Seepage	1.00	Very limited Seepage	1.00	Not limited	
87: Parleys-----	60	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
87: Wheelon-----	15	Somewhat limited Too clayey Slope	0.50 0.01	Somewhat limited Slope	0.01	Somewhat limited Too clayey Slope	0.50 0.01
88: Pavohroo-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.03
Povey-----	30	Very limited Slope Seepage Large stones content	1.00 1.00 0.07	Very limited Slope Seepage	1.00 1.00	Very limited Slope Gravel content Seepage Large stones content	1.00 0.76 0.52 0.07
89: Pavohroo-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.03
Stines-----	30	Very limited Seepage Slope Large stones content	1.00 1.00 0.27	Very limited Seepage Slope	1.00 1.00	Very limited Slope Seepage Gravel content Large stones content	1.00 0.52 0.32 0.27
Lonigan-----	20	Very limited Depth to bedrock Seepage Slope	1.00 1.00 1.00	Very limited Seepage Depth to bedrock Slope	1.00 1.00 1.00	Very limited Depth to bedrock Slope Seepage Gravel content	1.00 1.00 0.52 0.35
90: Pits, gravel-----	100	Not rated		Not rated		Not rated	
91: Povey-----	35	Very limited Seepage Slope Large stones content	1.00 1.00 0.07	Very limited Seepage Slope	1.00 1.00	Very limited Slope Gravel content Seepage Large stones content	1.00 0.76 0.52 0.07
Hades-----	30	Very limited Slope Too clayey	1.00 0.50	Very limited Slope	1.00	Very limited Slope Too clayey	1.00 0.50
Hondoho-----	25	Very limited Seepage Slope Large stones content	1.00 1.00 0.52	Very limited Seepage Slope	1.00 1.00	Very limited Slope Large stones content Seepage	1.00 0.52 0.52

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
92: Povey-----	45	Very limited Slope Seepage Large stones content	 1.00 1.00 0.07	Very limited Slope Seepage	 1.00 1.00	Very limited Slope Gravel content Seepage Large stones content	 1.00 0.76 0.52 0.07
Ireland-----	25	Very limited Slope Depth to bedrock Large stones	 1.00 1.00 1.00	Very limited Slope Depth to bedrock	 1.00 1.00	Very limited Depth to bedrock Slope Large stones	 1.00 1.00 1.00
Calpac-----	15	Very limited Slope Large stones	 1.00 1.00	Very limited Slope	 1.00	Very limited Slope Large stones Gravel content	 1.00 1.00 0.02
93: Povey-----	45	Very limited Slope Seepage Large stones content	 1.00 1.00 0.07	Very limited Slope Seepage	 1.00 1.00	Very limited Slope Gravel content Seepage Large stones content	 1.00 0.76 0.52 0.07
Pavohroo-----	30	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Gravel content	 1.00 0.03
94: Povirt-----	85	Very limited Depth to saturated zone Too clayey Excess sodium Ponding Flooding	 1.00 1.00 1.00 1.00 0.40	Very limited Depth to saturated zone Ponding Flooding	 1.00 1.00 0.40	Very limited Depth to saturated zone Too clayey Hard to compact Sodium content Ponding	 1.00 1.00 1.00 1.00 1.00
95: Raldridge-----	75	Very limited Seepage Slope	 1.00 0.01	Very limited Seepage Slope	 1.00 0.01	Very limited Gravel content Seepage Slope	 1.00 0.52 0.01
96: Rexburg-----	85	Not limited		Not limited		Not limited	
97: Rexburg-----	50	Somewhat limited Slope	 0.01	Somewhat limited Slope	 0.01	Somewhat limited Slope	 0.01
Arbone-----	25	Somewhat limited Slope	 0.01	Somewhat limited Slope	 0.01	Somewhat limited Gravel content Slope	 0.06 0.01
Ririe-----	15	Somewhat limited Slope	 0.01	Somewhat limited Slope	 0.01	Somewhat limited Slope	 0.01

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
98:							
Rexburg-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Arbone-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.06
Ririe-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
99:							
Rexburg-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Iphil-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Watercanyon-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
100:							
Rexburg-----	55	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01
Lanoak-----	35	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01
101:							
Rexburg-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Lanoak-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
102:							
Rexburg-----	35	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01
Lanoak-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01
Watercanyon-----	20	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01
103:							
Rexburg-----	50	Not limited		Not limited		Not limited	
Ririe-----	20	Not limited		Not limited		Not limited	
Kucera-----	15	Not limited		Not limited		Not limited	
104:							
Rexburg-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Thatcher-----	25	Very limited Slope Too clayey	1.00 0.50	Very limited Slope	1.00	Very limited Slope Too clayey	1.00 0.50

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
104: Ririe-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
105: Rexburg-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Watercanyon-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Lanoak-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
106: Ridgecrest-----	45	Very limited Slope Depth to bedrock Seepage Large stones content	1.00 1.00 1.00 0.97	Very limited Slope Seepage Depth to bedrock	1.00 1.00 1.00	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 0.97
Hondoho-----	35	Very limited Slope Seepage Large stones content	1.00 1.00 0.52	Very limited Slope Seepage	1.00 1.00	Very limited Slope Large stones content Seepage	1.00 0.52 0.52
107: Ridgecrest-----	35	Very limited Slope Depth to bedrock Seepage Large stones content	1.00 1.00 1.00 0.97	Very limited Slope Seepage Depth to bedrock	1.00 1.00 1.00	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 0.97
Hondoho-----	30	Very limited Slope Seepage Large stones content	1.00 1.00 0.52	Very limited Slope Seepage	1.00 1.00	Very limited Slope Large stones content Seepage	1.00 0.52 0.52
Hymas-----	15	Very limited Slope Depth to bedrock Large stones	1.00 1.00 1.00	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Depth to bedrock Slope Large stones Carbonate content	1.00 1.00 1.00
108: Ridgecrest-----	35	Very limited Slope Depth to bedrock Seepage Large stones content	1.00 1.00 1.00 0.97	Very limited Slope Seepage Depth to bedrock	1.00 1.00 1.00	Very limited Depth to bedrock Slope Large stones content	1.00 1.00 0.97
Hondoho-----	30	Very limited Slope Seepage Large stones content	1.00 1.00 0.52	Very limited Slope Seepage	1.00 1.00	Very limited Slope Large stones content Seepage	1.00 0.52 0.52

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
108: Lizdale-----	20	Very limited Slope Seepage	 1.00 1.00	Very limited Slope Seepage	 1.00 1.00	Very limited Slope Seepage Gravel content Carbonate content	 1.00 1.00 1.00 1.00
109: Ridgecrest-----	45	Very limited Slope Depth to bedrock Seepage Large stones content	 1.00 1.00 1.00 0.97	Very limited Slope Seepage Depth to bedrock	 1.00 1.00 1.00	Very limited Depth to bedrock Slope Large stones content	 1.00 1.00 0.97
Hymas-----	30	Very limited Slope Depth to bedrock Large stones	 1.00 1.00 1.00	Very limited Slope Depth to bedrock	 1.00 1.00	Very limited Depth to bedrock Slope Large stones Carbonate content	 1.00 1.00 1.00 1.00
110: Ririe-----	50	Somewhat limited Slope	 0.01	Somewhat limited Slope	 0.01	Somewhat limited Slope	 0.01
Buist-----	25	Very limited Seepage Slope	 1.00 0.01	Very limited Seepage Slope	 1.00 0.01	Very limited Gravel content Seepage Slope	 1.00 0.22 0.01
111: Ririe-----	50	Somewhat limited Slope	 0.01	Somewhat limited Slope	 0.01	Somewhat limited Slope	 0.01
Cedarhill-----	25	Very limited Seepage Large stones content Slope	 1.00 0.16 0.01	Very limited Seepage Slope	 1.00 0.01	Somewhat limited Gravel content Seepage Large stones content Slope	 0.46 0.21 0.16 0.01
112: Ririe-----	50	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope	 1.00
Cedarhill-----	25	Very limited Slope Seepage Large stones content	 1.00 1.00 0.16	Very limited Slope Seepage	 1.00 1.00	Very limited Slope Gravel content Seepage Large stones content	 1.00 0.46 0.21 0.16
113: Ririe-----	50	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope	 1.00
Hondoho-----	25	Very limited Seepage Slope Large stones content	 1.00 1.00 0.52	Very limited Seepage Slope	 1.00 1.00	Very limited Slope Large stones content Seepage	 1.00 0.52 0.52

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
114:							
Ririe-----	40	Not limited		Not limited		Not limited	
Iphil-----	25	Not limited		Not limited		Not limited	
Kucera-----	20	Not limited		Not limited		Not limited	
115:							
Ririe-----	30	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01
Iphil-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01
Rexburg-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01
116:							
Ririe-----	45	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01
Rexburg-----	40	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01
117:							
Ririe-----	50	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01
Watercanyon-----	25	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01
118:							
Ririe-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Watercanyon-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
119:							
Samaria-----	90	Very limited Seepage	1.00	Very limited Seepage	1.00	Somewhat limited Seepage Gravel content	0.52 0.17
120:							
Samaria-----	90	Very limited Seepage	1.00	Very limited Seepage	1.00	Somewhat limited Seepage Gravel content	0.52 0.17
121:							
Samaria-----	55	Very limited Seepage Slope	1.00 0.01	Very limited Seepage Slope	1.00 0.01	Somewhat limited Seepage Gravel content Slope	0.52 0.17 0.01
Pollynot-----	30	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01	Somewhat limited Slope	0.01

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
122: Samaria-----	50	Very limited Seepage Slope	1.00 0.01	Very limited Seepage Slope	1.00 0.01	Somewhat limited Seepage Gravel content Slope	0.52 0.17 0.01
Sterling-----	35	Somewhat limited Large stones content Slope	0.01 0.01	Somewhat limited Slope	0.01	Somewhat limited Gravel content Large stones content Slope	0.97 0.01 0.01
123: Sterling-----	80	Very limited Slope Large stones content	1.00 0.01	Very limited Slope	1.00	Very limited Slope Gravel content Large stones content	1.00 0.97 0.01
124: Thatcher-----	85	Somewhat limited Too clayey Slope	0.50 0.01	Somewhat limited Slope	0.01	Somewhat limited Too clayey Slope	0.50 0.01
125: Thatcher-----	45	Very limited Slope Too clayey	1.00 0.50	Very limited Slope	1.00	Very limited Slope Too clayey	1.00 0.50
Jensen-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.16
126: Freedom-----	75	Not limited		Not limited		Not limited	
127: Tickason-----	80	Not limited		Not limited		Not limited	
128: Tickason-----	85	Not limited		Not limited		Not limited	
129: Tirod-----	85	Not limited		Not limited		Not limited	
130: Toefoot-----	90	Not limited		Very limited Seepage	1.00	Not limited	
131: Welby-----	65	Very limited Seepage	1.00	Very limited Seepage	1.00	Not limited	
Parleys-----	20	Not limited		Not limited		Not limited	
132: Wursten-----	85	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Somewhat limited Slope Gravel content	0.16 0.15

Table 10b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
133: Yago-----	40	Very limited Slope Large stones content Too clayey	 1.00 0.97 0.50	Very limited Slope	 1.00	Very limited Slope Large stones content Too clayey	 1.00 0.97 0.50
Manila-----	35	Very limited Slope Too clayey	 1.00 1.00	Very limited Slope	 1.00	Very limited Slope Too clayey Hard to compact	 1.00 1.00 1.00
134: Water-----	100	Not rated		Not rated		Not rated	

Table 11a.--Construction Materials (Part 1)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The closer the value is to 0, the greater the potential limitation. Values of 0 are absolute limitations based on the soil property criteria used to develop the interpretation. Values closer to 1.0 have less of a limitation. Values of 1.00 indicate absolutely no limitation. Fine-earth fraction and rock fragment limiting features are reported on a weight basis. A brief rating criteria summary and a definition of abbreviations used in the ratings are given at the end of this report. The symbol < means less than; > means more than)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1: Araveton-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Hard to reclaim Rock fragment content	0.12 0.97
Hades-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Hard to reclaim Rock fragment content	0.50 0.97
2: Arbone-----	75	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Hard to reclaim Calcium carbonates 15 to 40 percent	0.00 0.68 0.97
3: Arbone-----	90	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Hard to reclaim Calcium carbonates 15 to 40 percent	0.00 0.68 0.97
4: Arbone-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Slope >15 percent Hard to reclaim Calcium carbonates 15 to 40 percent	0.00 0.00 0.68 0.97

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
5:							
Arbone-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Hard to reclaim Calcium carbonates 15 to 40 percent	0.00 0.68 0.97
Hondoho-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Hard to reclaim	0.00 0.00
Cedarhill-----	20	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Bulk density >1.8 in upper 20 inches Hard to reclaim Rock fragment content Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.68
6:							
Arbone-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Slope >15 percent Hard to reclaim Calcium carbonates 15 to 40 percent	0.00 0.00 0.68 0.97
Hondoho-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Slope >15 percent Hard to reclaim	0.00 0.00 0.00
Cedarhill-----	20	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Bulk density >1.8 in upper 20 inches Hard to reclaim Rock fragment content Slope >15 percent Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.00 0.68

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7: Bayhook-----	90	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor SAR >13 EC 4 to 8 dS/m Calcium carbonates 15 to 40 percent	0.00 0.50 0.80
8: Bayhook-----	55	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor SAR >13 EC 4 to 8 dS/m Calcium carbonates 15 to 40 percent	0.00 0.50 0.80
Ecur-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.00 0.04	Poor SAR >13 Calcium carbonates 15 to 40 percent	0.00 0.08
9: Bingham-----	90	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.25	Fair Thickest layer not a source Bottom layer possible source	0.00 0.12	Poor Hard to reclaim Rock fragment content	0.00 0.03
10: Bingham-----	45	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.25	Fair Thickest layer not a source Bottom layer possible source	0.00 0.12	Poor Hard to reclaim Rock fragment content	0.00 0.03
Tirod-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Good	
11: Bloor-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor SAR >13 EC >8 dS/m	0.00 0.00

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
11: Brinnum-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor SAR >13 EC >8 dS/m Wetness at 1 to 2.8 feet Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.32
12: Bothwell-----	80	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Clay 27 to 40 percent	0.95
13: Bothwell-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Clay 27 to 40 percent	0.00 0.95
Hades-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Hard to reclaim Rock fragment content	0.00 0.50 0.97
Justesen-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Hard to reclaim	0.00 0.68 0.80
14: Brinnum-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor SAR >13 EC >8 dS/m Wetness at 1 to 2.8 feet Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.32
Logan-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Wetness at <1 foot SAR 4 to 13	0.00 0.22

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
14: Langless-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Calcium carbonates >40 percent SAR >13 Wetness at 1 to 2.8 feet EC 4 to 8 dS/m	0.00 0.00 0.04 0.50
15: Buckboard-----	80	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Good	
16: Buist-----	75	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.43	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Hard to reclaim Rock fragment content	0.00 0.00 0.00
17: Calpac-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Hard to reclaim Rock fragment content	0.00 0.00 0.00
Ridgecrest-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Calcium carbonates 15 to 40 percent Depth to bedrock 20 to 40 inches	0.00 0.00 0.01 0.78
Ireland-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Depth to bedrock 20 to 40 inches	0.00 0.00 0.42

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
18: Cedarhill-----	85	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Bulk density >1.8 in upper 20 inches Hard to reclaim Rock fragment content Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.68
19: Cedarhill-----	75	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Bulk density >1.8 in upper 20 inches Hard to reclaim Rock fragment content Slope >15 percent Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.68
20: Cedarhill-----	45	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Bulk density >1.8 in upper 20 inches Hard to reclaim Rock fragment content Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.68
Hymas-----	30	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Depth to bedrock <20 inches Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.46
21: Cedarhill-----	40	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Bulk density >1.8 in upper 20 inches Hard to reclaim Rock fragment content Slope >15 percent Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.68

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
21: Lostine-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent	0.00
22: Collinston-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Calcium carbonates 15 to 40 percent	0.80
23: Collinston-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Calcium carbonates 15 to 40 percent	0.80
Kearns-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Good	
24: Copenhagen-----	35	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.25	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Depth to bedrock <20 inches Slope >15 percent	0.00 0.00 0.00
Lonigan-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Slope >15 percent Calcium carbonates 15 to 40 percent Depth to bedrock 20 to 40 inches	0.00 0.00 0.68 0.68
Manila-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Clay >40 percent	0.00 0.00

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
25: Darkbull-----	40	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.62	Poor Thickest layer not a source Bottom layer possible source	0.00 0.02	Poor Hard to reclaim Rock fragment content SAR >13 Slope >15 percent Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.00 0.97
Pyrat-----	30	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.62	Poor Thickest layer not a source Bottom layer possible source	0.00 0.07	Poor Hard to reclaim Rock fragment content Slope >15 percent	0.00 0.00 0.00
Ecur-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.00 0.04	Poor SAR >13 Slope >15 percent Calcium carbonates 15 to 40 percent	0.00 0.00 0.08
26: DeJarnet-----	90	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.49	Fair Thickest layer not a source Bottom layer possible source	0.00 0.08	Poor Hard to reclaim Rock fragment content	0.00 0.00
27: Dumps, mine-----	100	Not rated		Not rated		Not rated	
28: Ecur-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.00 0.04	Poor SAR >13 Calcium carbonates 15 to 40 percent	0.00 0.08
29: Ecur-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer possible source Bottom layer possible source	0.00 0.04	Poor SAR >13 Calcium carbonates 15 to 40 percent	0.00 0.08

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
29: Darkbull-----	30	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.62	Poor Thickest layer not a source Bottom layer possible source	0.00 0.02	Poor Hard to reclaim Rock fragment content SAR >13 Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.97
30: Elevator-----	80	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Clay 27 to 40 percent	0.95
31: Elevator-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Clay 27 to 40 percent	0.95
Jensen-----	35	Poor Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.06	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Hard to reclaim Rock fragment content	0.00 0.00
32: Elevator-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Clay 27 to 40 percent	0.95
Jensen-----	35	Poor Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.06	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Hard to reclaim Rock fragment content	0.00 0.00
33: Fridlo-----	75	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor SAR >13 EC 4 to 8 dS/m Clay 27 to 40 percent	0.00 0.50 0.98

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
34: Goosenawt-----	75	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content	0.00
35: Hans-----	80	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Clay 27 to 40 percent	0.98
36: Highcreek-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Rock fragment content Hard to reclaim	0.88 0.92
Sterling-----	30	Fair Thickest layer possible source Bottom layer possible source	0.12 0.25	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Hard to reclaim Rock fragment content Calcium carbonates 15 to 40 percent	0.00 0.00 0.68
37: Highcreek-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Hard to reclaim	0.00 0.88 0.92
Sterling-----	35	Fair Thickest layer possible source Bottom layer possible source	0.12 0.25	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Hard to reclaim Rock fragment content Slope >15 percent Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.68
38: Hillfield-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Calcium carbonates 15 to 40 percent	0.00 0.97

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
38: Kucera-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent	0.00
39: Hillfield-----	65	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Calcium carbonates 15 to 40 percent	0.00 0.97
Kucera-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent	0.00
40: Hondoho-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Hard to reclaim	0.00 0.00 0.00
Calpac-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Hard to reclaim Rock fragment content	0.00 0.00 0.00
Lizdale-----	20	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.62	Fair Thickest layer possible source Bottom layer possible source	0.04 0.10	Poor Slope >15 percent Hard to reclaim Rock fragment content Calcium carbonates >40 percent	0.00 0.00 0.00 0.00
41: Hondoho-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Slope >15 percent Hard to reclaim	0.00 0.00 0.00

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
41: Hymas-----	25	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Depth to bedrock <20 inches Slope >15 percent Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.46
Pavohroo-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Slope >15 percent Hard to reclaim	0.00 0.00 0.32
42: Hondoho-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Hard to reclaim	0.00 0.00 0.00
Hymas-----	25	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Depth to bedrock <20 inches Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.46
Pavohroo-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Hard to reclaim	0.00 0.00 0.32
43: Hondoho-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Slope >15 percent Hard to reclaim	0.00 0.00 0.00
Ridgecrest-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Slope >15 percent Calcium carbonates 15 to 40 percent Depth to bedrock 20 to 40 inches	0.00 0.00 0.01 0.78

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
43: Hades-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Hard to reclaim Rock fragment content	0.00 0.50 0.97
44: Hutchley-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Depth to bedrock <20 inches Rock fragment content Slope >15 percent Clay 27 to 40 percent	0.00 0.00 0.00 0.98
McCarey-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Depth to bedrock 20 to 40 inches Rock fragment content	0.00 0.16 0.88
Araveton-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Hard to reclaim Rock fragment content	0.00 0.12 0.97
45: Hymas-----	35	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Depth to bedrock <20 inches Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.46
Calpac-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Hard to reclaim Rock fragment content	0.00 0.00 0.00
Ireland-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Depth to bedrock 20 to 40 inches	0.00 0.00 0.42

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
46: Hymas-----	30	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Depth to bedrock <20 inches Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.46
Northwater-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Hard to reclaim Rock fragment content	0.00 0.00 0.00
Clayburn-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Hard to reclaim Rock fragment content	0.00 0.00 0.05
47: Hymas-----	45	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Depth to bedrock <20 inches Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.46
Povey-----	30	Fair Thickest layer possible source Bottom layer possible source	0.12 0.14	Poor Bottom layer possible source Thickest layer possible source	0.03 0.04	Poor Slope >15 percent Hard to reclaim Rock fragment content	0.00 0.00 0.00
48: Hymas-----	35	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Depth to bedrock <20 inches Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.46
Povey-----	25	Fair Thickest layer possible source Bottom layer possible source	0.12 0.14	Poor Bottom layer possible source Thickest layer possible source	0.03 0.04	Poor Slope >15 percent Hard to reclaim Rock fragment content	0.00 0.00 0.00

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
48: Pavohroo-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Hard to reclaim	0.00 0.00 0.32
49: Inkom-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Wetness at <1 foot Calcium carbonates 15 to 40 percent	0.00 0.16
50: Iphil-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Slope 12 to 15 percent Calcium carbonates 15 to 40 percent	0.04 0.68
Ririe-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Slope 12 to 15 percent SAR 4 to 13 Calcium carbonates 15 to 40 percent	0.04 0.22 0.68
Watercanyon-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Calcium carbonates 15 to 40 percent Slope 8 to 12 percent SAR 4 to 13	0.68 0.84 0.90
51: Ireland-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Depth to bedrock 20 to 40 inches	0.00 0.00 0.42
Calpac-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Hard to reclaim Rock fragment content	0.00 0.00 0.00

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
52: Jensen-----	80	Poor Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.06	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Hard to reclaim Rock fragment content	0.00 0.00
53: Jensen-----	80	Poor Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.06	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Hard to reclaim Rock fragment content	0.00 0.00
54: Jensen-----	30	Poor Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.06	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Hard to reclaim Rock fragment content Slope 8 to 12 percent	0.00 0.00 0.84
Iphil-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Calcium carbonates 15 to 40 percent	0.68
Wursten-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content SAR 4 to 13 Hard to reclaim Calcium carbonates 15 to 40 percent	0.00 0.40 0.68 0.92
55: Jovine-----	80	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Good	
56: Justesen-----	75	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Rock fragment content Hard to reclaim	0.68 0.80

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
57: Justesen-----	75	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Hard to reclaim	0.00 0.68 0.80
58: Justesen-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Hard to reclaim	0.00 0.68 0.80
Ririe-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent SAR 4 to 13 Calcium carbonates 15 to 40 percent	0.00 0.22 0.68
Buist-----	15	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.43	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Hard to reclaim Slope >15 percent Rock fragment content	0.00 0.00 0.00
59: Kearns-----	80	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Good	
60: Kearns-----	75	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Good	
61: Kidman-----	90	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer possible source	0.00 0.00	Good	

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
62: Kidman-----	60	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer possible source	0.00 0.00	Good	
Preston-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Fair Thickest layer possible source Bottom layer possible source	0.31 0.34	Poor Sand fraction >85 percent SAR 4 to 13	0.00 0.98
63: Kucera-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Good	
64: Lagonot-----	90	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair SAR 4 to 13 Calcium carbonates 15 to 40 percent Wetness at 1 to 2.8 feet	0.60 0.68 0.91
65: Langless-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Calcium carbonates >40 percent SAR >13 Wetness at 1 to 2.8 feet EC 4 to 8 dS/m	0.00 0.00 0.04 0.50
66: Langless-----	55	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Calcium carbonates >40 percent SAR >13 Wetness at 1 to 2.8 feet EC 4 to 8 dS/m	0.00 0.00 0.04 0.50
Logan-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Wetness at <1 foot SAR 4 to 13	0.00 0.22

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
67: Lanoak-----	90	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Good	
68: Lanoak-----	90	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent	0.00
69: Lanoak-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Slope 12 to 15 percent	0.16
Hondoho-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Hard to reclaim Slope >15 percent	0.00 0.00 0.00
70: Logan-----	95	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Wetness at <1 foot SAR 4 to 13	0.00 0.22
71: Lonigan-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Slope >15 percent Calcium carbonates 15 to 40 percent Depth to bedrock 20 to 40 inches	0.00 0.00 0.68 0.68
Lizdale-----	35	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.62	Fair Thickest layer possible source Bottom layer possible source	0.04 0.10	Poor Hard to reclaim Rock fragment content Calcium carbonates >40 percent Slope >15 percent	0.00 0.00 0.00 0.00

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
72: Lostine-----	75	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent	0.00
73: Manila-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Clay >40 percent	0.00
74: Manila-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Clay >40 percent	0.00
Broadhead-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Clay >40 percent Hard to reclaim	0.00 0.95
75: Manila-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Clay >40 percent	0.00 0.00
Broadhead-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Clay >40 percent Slope >15 percent Hard to reclaim	0.00 0.00 0.95
76: Manila-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Clay >40 percent Slope >15 percent	0.00 0.00

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
76: Lonigan-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Slope >15 percent Calcium carbonates 15 to 40 percent Depth to bedrock 20 to 40 inches	0.00 0.00 0.68 0.68
77: Manila-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Clay >40 percent	0.00
Obnot-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Clay >40 percent Hard to reclaim	0.00 0.12
78: Manila-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Clay >40 percent	0.00
Yago-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Hard to reclaim Rock fragment content Clay 27 to 40 percent	0.00 0.00 0.32
79: Manila-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Clay >40 percent	0.00 0.00
Yago-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Hard to reclaim Rock fragment content Slope >15 percent Clay 27 to 40 percent	0.00 0.00 0.00 0.32

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
80: Mellor-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor EC >8 dS/m SAR >13 Calcium carbonates 15 to 40 percent	0.00 0.00 0.92
Freedom-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair SAR 4 to 13 Calcium carbonates 15 to 40 percent	0.22 0.46
81: Neeley-----	90	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor SAR >13 Calcium carbonates 15 to 40 percent	0.00 0.80
82: Northwater-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Hard to reclaim Rock fragment content	0.00 0.00 0.00
Povey-----	30	Fair Thickest layer possible source Bottom layer possible source	0.12 0.14	Poor Bottom layer possible source Thickest layer possible source	0.03 0.04	Poor Slope >15 percent Hard to reclaim Rock fragment content	0.00 0.00 0.00
Pavohroo-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Hard to reclaim	0.00 0.00 0.32
83: Parehat-----	90	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor SAR >13 Wetness at 1 to 2.8 feet	0.00 0.89
84: Parleys-----	80	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Clay 27 to 40 percent	0.98

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
85: Parleys-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Clay 27 to 40 percent	0.98
86: Parleys-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Clay 27 to 40 percent	0.98
Welby-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor SAR >13 Calcium carbonates 15 to 40 percent	0.00 0.68
87: Parleys-----	60	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Clay 27 to 40 percent	0.98
Wheelon-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Calcium carbonates 15 to 40 percent SAR 4 to 13 Clay 27 to 40 percent	0.46 0.60 0.98
88: Pavohroo-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Hard to reclaim	0.00 0.00 0.32
Povey-----	30	Fair Thickest layer possible source Bottom layer possible source	0.12 0.14	Poor Bottom layer possible source Thickest layer possible source	0.03 0.04	Poor Slope >15 percent Hard to reclaim Rock fragment content	0.00 0.00 0.00
89: Pavohroo-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Slope >15 percent Hard to reclaim	0.00 0.00 0.32

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
89: Stines-----	30	Fair Bottom layer not a source Thickest layer possible source	0.00 0.12	Poor Bottom layer not a source Thickest layer possible source	0.00 0.02	Poor Hard to reclaim Rock fragment content Slope >15 percent	0.00 0.00 0.00
Lonigan-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Slope >15 percent Calcium carbonates 15 to 40 percent Depth to bedrock 20 to 40 inches	0.00 0.00 0.68 0.68
90: Pits, gravel-----	100	Good Bottom layer not a source	0.00	Good Bottom layer not a source	0.00	Not rated	
91: Povey-----	35	Fair Thickest layer possible source Bottom layer possible source	0.12 0.14	Poor Bottom layer possible source Thickest layer possible source	0.03 0.04	Poor Hard to reclaim Rock fragment content Slope >15 percent	0.00 0.00 0.00
Hades-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Hard to reclaim Rock fragment content	0.00 0.50 0.97
Hondoho-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Hard to reclaim Slope >15 percent	0.00 0.00 0.00
92: Povey-----	45	Fair Thickest layer possible source Bottom layer possible source	0.12 0.14	Poor Bottom layer possible source Thickest layer possible source	0.03 0.04	Poor Slope >15 percent Hard to reclaim Rock fragment content	0.00 0.00 0.00
Ireland-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Depth to bedrock 20 to 40 inches	0.00 0.00 0.42

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
92: Calpac-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Hard to reclaim Rock fragment content	0.00 0.00 0.00
93: Povey-----	45	Fair Thickest layer possible source Bottom layer possible source	0.12 0.14	Poor Bottom layer possible source Thickest layer possible source	0.03 0.04	Poor Slope >15 percent Hard to reclaim Rock fragment content	0.00 0.00 0.00
Pavohroo-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Hard to reclaim	0.00 0.00 0.32
94: Povirt-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Clay >40 percent Wetness at <1 foot SAR >13	0.00 0.00 0.00
95: Raldridge-----	75	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.25	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Hard to reclaim Rock fragment content Calcium carbonates 15 to 40 percent	0.00 0.00 0.92
96: Rexburg-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Calcium carbonates 15 to 40 percent	0.80
97: Rexburg-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Calcium carbonates 15 to 40 percent	0.80

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
97: Arbone-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Hard to reclaim Calcium carbonates 15 to 40 percent	0.00 0.68 0.97
Ririe-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair SAR 4 to 13 Calcium carbonates 15 to 40 percent	0.22 0.68
98: Rexburg-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Calcium carbonates 15 to 40 percent	0.00 0.80
Arbone-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Slope >15 percent Hard to reclaim Calcium carbonates 15 to 40 percent	0.00 0.00 0.68 0.97
Ririe-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent SAR 4 to 13 Calcium carbonates 15 to 40 percent	0.00 0.22 0.68
99: Rexburg-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Calcium carbonates 15 to 40 percent	0.00 0.80
Iphil-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Calcium carbonates 15 to 40 percent	0.00 0.68

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
99: Watercanyon-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Calcium carbonates 15 to 40 percent SAR 4 to 13	0.00 0.68 0.90
100: Rexburg-----	55	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Calcium carbonates 15 to 40 percent	0.80
Lanoak-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Good	
101: Rexburg-----	55	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Calcium carbonates 15 to 40 percent	0.00 0.80
Lanoak-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent	0.00
102: Rexburg-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Calcium carbonates 15 to 40 percent	0.80
Lanoak-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Good	
Watercanyon-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Calcium carbonates 15 to 40 percent SAR 4 to 13	0.68 0.90

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
103: Rexburg-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Calcium carbonates 15 to 40 percent	0.80
Ririe-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair SAR 4 to 13 Calcium carbonates 15 to 40 percent	0.22 0.68
Kucera-----	15	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Good	
104: Rexburg-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Calcium carbonates 15 to 40 percent	0.00 0.80
Thatcher-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Clay 27 to 40 percent	0.00 0.95
Ririe-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent SAR 4 to 13 Calcium carbonates 15 to 40 percent	0.00 0.22 0.68
105: Rexburg-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Calcium carbonates 15 to 40 percent	0.00 0.80
Watercanyon-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Calcium carbonates 15 to 40 percent SAR 4 to 13	0.00 0.68 0.90

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
105: Lanoak-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent	0.00
106: Ridgecrest-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Calcium carbonates 15 to 40 percent Depth to bedrock 20 to 40 inches	0.00 0.00 0.01 0.78
Hondoho-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Hard to reclaim	0.00 0.00 0.00
107: Ridgecrest-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Calcium carbonates 15 to 40 percent Depth to bedrock 20 to 40 inches	0.00 0.00 0.01 0.78
Hondoho-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Hard to reclaim	0.00 0.00 0.00
Hymas-----	15	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Depth to bedrock <20 inches Calcium carbonates 15 to 40 inches	0.00 0.00 0.00 0.46

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
108: Ridgecrest-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Calcium carbonates 15 to 40 percent Depth to bedrock 20 to 40 inches	0.00 0.00 0.01 0.78
Hondoho-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Hard to reclaim	0.00 0.00 0.00
Lizdale-----	20	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.62	Fair Thickest layer possible source Bottom layer possible source	0.04 0.10	Poor Slope >15 percent Hard to reclaim Rock fragment content Calcium carbonates >40 percent	0.00 0.00 0.00 0.00
109: Ridgecrest-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Calcium carbonates 15 to 40 percent Depth to bedrock 20 to 40 inches	0.00 0.00 0.01 0.78
Hymas-----	30	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Rock fragment content Depth to bedrock <20 inches Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.46
110: Ririe-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair SAR 4 to 13 Calcium carbonates 15 to 40 percent	0.22 0.68

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
110: Buist-----	25	Fair Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.43	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Hard to reclaim Rock fragment content	0.00 0.00
111: Ririe-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair SAR 4 to 13 Calcium carbonates 15 to 40 percent	0.22 0.68
Cedarhill-----	25	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Bulk density >1.8 in upper 20 inches Hard to reclaim Rock fragment content Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.68
112: Ririe-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent SAR 4 to 13 Calcium carbonates 15 to 40 percent	0.00 0.22 0.68
Cedarhill-----	25	Poor Thickest layer not a source due to fines or thin layer Bottom layer not a source	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Bulk density >1.8 in upper 20 inches Hard to reclaim Rock fragment content Slope >15 percent Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.00 0.68
113: Ririe-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent SAR 4 to 13 Calcium carbonates 15 to 40 percent	0.00 0.22 0.68

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
113: Hondoho-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content Slope >15 percent Hard to reclaim	0.00 0.00 0.00
114: Ririe-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair SAR 4 to 13 Calcium carbonates 15 to 40 percent	0.22 0.68
Iphil-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Calcium carbonates 15 to 40 percent	0.68
Kucera-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Good	
115: Ririe-----	30	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair SAR 4 to 13 Calcium carbonates 15 to 40 percent	0.22 0.68
Iphil-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Calcium carbonates 15 to 40 percent	0.68
Rexburg-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Calcium carbonates 15 to 40 percent	0.80
116: Ririe-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair SAR 4 to 13 Calcium carbonates 15 to 40 percent	0.22 0.68

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
116: Rexburg-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Calcium carbonates 15 to 40 percent	0.80
117: Ririe-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair SAR 4 to 13 Calcium carbonates 15 to 40 percent	0.22 0.68
Watercanyon-----	25	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Calcium carbonates 15 to 40 percent SAR 4 to 13	0.68 0.90
118: Ririe-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent SAR 4 to 13 Calcium carbonates 15 to 40 percent	0.00 0.22 0.68
Watercanyon-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Calcium carbonates 15 to 40 percent SAR 4 to 13	0.00 0.68 0.90
119: Samaria-----	90	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.03	Poor Rock fragment content SAR 4 to 13 Hard to reclaim Calcium carbonates 15 to 40 percent	0.00 0.22 0.32 0.92
120: Samaria-----	90	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.03	Poor Rock fragment content SAR 4 to 13 Hard to reclaim Calcium carbonates 15 to 40 percent	0.00 0.22 0.32 0.92

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
121: Samaria-----	55	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.03	Poor Rock fragment content SAR 4 to 13 Hard to reclaim Calcium carbonates 15 to 40 percent	0.00 0.22 0.32 0.92
Pollynot-----	30	Good Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.75	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Hard to reclaim Calcium carbonates 15 to 40 percent	0.00 0.92
122: Samaria-----	50	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Thickest layer not a source Bottom layer possible source	0.00 0.03	Poor Rock fragment content SAR 4 to 13 Hard to reclaim Calcium carbonates 15 to 40 percent	0.00 0.22 0.32 0.92
Sterling-----	35	Fair Thickest layer possible source Bottom layer possible source	0.12 0.25	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Hard to reclaim Rock fragment content Calcium carbonates 15 to 40 percent	0.00 0.00 0.68
123: Sterling-----	80	Fair Thickest layer possible source Bottom layer possible source	0.12 0.25	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Hard to reclaim Rock fragment content Slope >15 percent Calcium carbonates 15 to 40 percent	0.00 0.00 0.00 0.68
124: Thatcher-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Clay 27 to 40 percent	0.95

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
125: Thatcher-----	45	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Clay 27 to 40 percent	0.00 0.95
Jensen-----	35	Poor Thickest layer not a source due to fines or thin layer Bottom layer possible source	0.00 0.00 0.06	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Hard to reclaim Slope >15 percent Rock fragment content	0.00 0.00 0.00
126: Freedom-----	75	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair SAR 4 to 13 Calcium carbonates 15 to 40 percent	0.22 0.46
127: Tickason-----	80	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Good	
128: Tickason-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Good	
129: Tirod-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Good	
130: Toefoot-----	90	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Good	

Table 11a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
131: Welby-----	65	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor SAR >13 Calcium carbonates 15 to 40 percent	0.00 0.68
Parleys-----	20	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Fair Clay 27 to 40 percent	0.98
132: Wursten-----	85	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Rock fragment content SAR 4 to 13 Hard to reclaim Slope 8 to 12 percent Calcium carbonates 15 to 40 percent	0.00 0.40 0.68 0.84 0.92
133: Yago-----	40	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Hard to reclaim Rock fragment content Clay 27 to 40 percent	0.00 0.00 0.00 0.32
Manila-----	35	Poor Bottom layer not a source Thickest layer not a source due to fines or thin layer	0.00 0.00	Poor Bottom layer not a source Thickest layer not a source	0.00 0.00	Poor Slope >15 percent Clay >40 percent	0.00 0.00
134: Water-----	100	Not rated		Not rated		Not rated	

The potential as a source of gravel evaluates the content of coarse fragments more than 0.2 inch in diameter in the bottom layer or in the thickest layer of the soil. The potential as a source of sand evaluates the amount of sand and fine gravel in the thickest layer or in the bottom layer of the soil. The organic soil layers that have a Unified engineering class for peat (PT) are also evaluated. The potential as a source of topsoil evaluates certain soil properties at various depths, including calcium carbonates, percent clay, soil bulk density, percent sand, soil wetness, content of coarse fragments 0.2 to 3 inches in diameter, content of fragments more than 3 inches in diameter, organic matter content (OM), sodium content expressed as the sodium adsorption ratio (SAR), salinity expressed as dS/m of electrical conductivity (EC), depth to bedrock, slope, and soil pH.

Table 11b.--Construction Materials (Part 2)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map	Potential source of reclamation material		Potential source of roadfill	
	unit	Rating class and limiting features	Value	Rating class and limiting features	Value
1: Araveton-----	50	Fair Carbonate content Water erosion	0.68 0.99	Fair Shrink-swell	0.87
Hades-----	25	Fair Water erosion	0.99	Poor Low strength	0.00
2: Arbone-----	75	Fair Low organic matter content Water erosion Carbonate content	0.88 0.90 0.97	Good	
3: Arbone-----	90	Fair Low organic matter content Water erosion Carbonate content	0.88 0.90 0.97	Good	
4: Arbone-----	85	Fair Low organic matter content Water erosion Carbonate content	0.88 0.90 0.97	Fair Slope	0.98
5: Arbone-----	35	Fair Low organic matter content Water erosion Carbonate content	0.88 0.90 0.97	Good	
Hondoho-----	30	Fair Cobble content Low organic matter content Carbonate content Droughtiness	0.48 0.50 0.80 0.99	Fair Cobble content	0.07
Cedarhill-----	20	Fair Carbonate content Droughtiness Cobble content	0.68 0.75 0.94	Fair Cobble content	0.94
6: Arbone-----	45	Fair Low organic matter content Carbonate content	0.88 0.97	Fair Slope	0.32

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
6: Hondoho-----	25	Fair Cobble content Low organic matter content Carbonate content Droughtiness	 0.48 0.50 0.80 0.99	Fair Cobble content Slope	 0.07 0.32
Cedarhill-----	20	Fair Carbonate content Droughtiness Cobble content	 0.68 0.75 0.94	Fair Slope Cobble content	 0.32 0.94
7: Bayhook-----	90	Poor Sodium content Too alkaline Water erosion Low organic matter content Carbonate content	 0.00 0.00 0.06 0.12 0.80	Good	
8: Bayhook-----	55	Poor Sodium content Too alkaline Water erosion Low organic matter content Carbonate content	 0.00 0.00 0.06 0.12 0.80	Good	
Ecur-----	35	Poor Sodium content Too alkaline Carbonate content Low organic matter content	 0.00 0.00 0.08 0.88	Good	
9: Bingham-----	90	Fair Carbonate content Droughtiness	 0.68 0.68	Good	
10: Bingham-----	45	Fair Carbonate content Droughtiness	 0.68 0.68	Good	
Tirod-----	35	Fair Low organic matter content Carbonate content	 0.88 0.92	Fair Low strength Shrink-swell	 0.22 0.87
11: Bloor-----	50	Poor Sodium content Too alkaline Salinity Water erosion Low organic matter content	 0.00 0.00 0.00 0.68 0.88	Good	

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
11: Brinnum-----	35	Poor		Poor	
		Too alkaline	0.00	Low strength	0.00
		Salinity	0.00	Wetness depth	0.00
		Sodium content	0.00	Shrink-swell	0.87
		Carbonate content	0.08		
		Low organic matter content	0.12		
		Water erosion	0.37		
		Droughtiness	0.99		
12: Bothwell-----	80	Fair		Poor	
		Water erosion	0.90	Low strength	0.00
		Too clayey	0.95	Shrink-swell	0.87
13: Bothwell-----	35	Fair		Poor	
		Water erosion	0.90	Low strength	0.00
		Too clayey	0.95	Shrink-swell	0.87
				Slope	0.98
Hades-----	30	Fair		Poor	
		Water erosion	0.99	Low strength	0.00
				Slope	0.98
Justesen-----	20	Fair		Poor	
		Water erosion	0.90	Low strength	0.00
				Shrink-swell	0.87
				Slope	0.98
14: Brinnum-----	30	Poor		Poor	
		Too alkaline	0.00	Low strength	0.00
		Salinity	0.00	Wetness depth	0.00
		Sodium content	0.00	Shrink-swell	0.87
		Carbonate content	0.08		
		Low organic matter content	0.12		
		Water erosion	0.37		
		Droughtiness	0.99		
Logan-----	30	Fair		Poor	
		Sodium content	0.22	Wetness depth	0.00
		Too acid	0.50	Low strength	0.00
		Carbonate content	0.68	Shrink-swell	0.87
Langless-----	25	Poor		Poor	
		Carbonate content	0.00	Low strength	0.00
		Sodium content	0.00	Wetness depth	0.04
		Too acid	0.32		
15: Buckboard-----	80	Good		Poor	
				Low strength	0.00
				Shrink-swell	0.98
16: Buist-----	75	Fair		Poor	
		Carbonate content	0.32	Slope	0.00
		Low organic matter content	0.88		

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
17: Calpac-----	30	Fair Cobble content Droughtiness Stone content	 0.06 0.76 0.98	Poor Slope Cobble content Shrink-swell	 0.00 0.00 0.92
Ridgecrest-----	30	Poor Carbonate content Cobble content Droughtiness Depth to bedrock	 0.00 0.03 0.11 0.90	Poor Depth to bedrock Slope Cobble content	 0.00 0.00 0.00
Ireland-----	25	Poor Droughtiness Cobble content Depth to bedrock Stone content	 0.00 0.00 0.35 0.91	Poor Depth to bedrock Slope Cobble content Stone content	 0.00 0.00 0.00 0.99
18: Cedarhill-----	85	Fair Carbonate content Droughtiness Cobble content	 0.68 0.75 0.94	Fair Cobble content	 0.94
19: Cedarhill-----	75	Fair Carbonate content Droughtiness Cobble content	 0.68 0.75 0.94	Fair Slope Cobble content	 0.32 0.94
20: Cedarhill-----	45	Fair Carbonate content Droughtiness Cobble content	 0.68 0.75 0.94	Poor Slope Cobble content	 0.00 0.94
Hymas-----	30	Poor Droughtiness Carbonate content Depth to bedrock Cobble content Stone content	 0.00 0.00 0.00 0.01 0.50	Poor Depth to bedrock Slope Cobble content Stone content	 0.00 0.00 0.46 0.99
21: Cedarhill-----	40	Fair Carbonate content Droughtiness Cobble content	 0.68 0.75 0.94	Fair Slope Cobble content	 0.32 0.94
Lostine-----	40	Fair Water erosion	 0.68	Fair Slope Low strength	 0.32 0.78
22: Collinston-----	85	Fair Carbonate content Low organic matter content Water erosion	 0.08 0.88 0.90	Poor Low strength Shrink-swell	 0.00 0.87

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
23: Collinston-----	45	Fair Carbonate content Low organic matter content Water erosion	0.08 0.88 0.90	Poor Low strength Shrink-swell	0.00 0.87
Kearns-----	30	Fair Low organic matter content Water erosion	0.88 0.90	Fair Low strength	0.78
24: Copenhagen-----	35	Poor Droughtiness Depth to bedrock Stone content	0.00 0.00 0.98	Poor Depth to bedrock Slope	0.00 0.00
Lonigan-----	30	Fair Droughtiness Carbonate content Depth to bedrock Low organic matter content	0.54 0.68 0.79 0.88	Poor Depth to bedrock Slope	0.00 0.00
Manila-----	20	Poor Too clayey Water erosion Carbonate content	0.00 0.90 0.97	Poor Low strength Slope Shrink-swell	0.00 0.00 0.57
25: Darkbull-----	40	Poor Too alkaline Sodium content Carbonate content	0.00 0.00 0.97	Fair Slope	0.98
Pyrat-----	30	Poor Too alkaline Low organic matter content Carbonate content	0.00 0.12 0.92	Fair Slope	0.98
Ecur-----	25	Poor Sodium content Too alkaline Carbonate content Low organic matter content	0.00 0.00 0.08 0.88	Fair Slope	0.98
26: DeJarnet-----	90	Fair Carbonate content Droughtiness	0.97 0.98	Fair Shrink-swell	0.87
27: Dumps, mine-----	100	Not rated		Not rated	

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
28: Ecur-----	85	Poor Sodium content Too alkaline Carbonate content Low organic matter content	0.00 0.00 0.08 0.88	Good	
29: Ecur-----	45	Poor Too alkaline Sodium content Carbonate content Low organic matter content	0.00 0.00 0.08 0.88	Good	
Darkbull-----	30	Poor Too alkaline Sodium content Carbonate content	0.00 0.00 0.97	Good	
30: Elevator-----	80	Fair Carbonate content Low organic matter content Water erosion Too clayey	0.68 0.88 0.90 0.95	Poor Low strength Shrink-swell	0.00 0.87
31: Elevator-----	40	Fair Carbonate content Low organic matter content Water erosion Too clayey	0.68 0.88 0.90 0.95	Poor Low strength Shrink-swell	0.00 0.87
Jensen-----	35	Fair Water erosion	0.99	Fair Shrink-swell	0.98
32: Elevator-----	40	Fair Carbonate content Low organic matter content Water erosion Too clayey	0.68 0.88 0.90 0.95	Poor Low strength Shrink-swell	0.00 0.87
Jensen-----	35	Fair Water erosion	0.99	Fair Shrink-swell	0.98
33: Fridlo-----	75	Poor Sodium content Carbonate content Salinity Low organic matter content Too clayey Water erosion	0.00 0.46 0.50 0.88 0.98 0.99	Poor Low strength Shrink-swell	0.00 0.87

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
34: Goosenawt-----	75	Good		Poor Low strength Shrink-swell	0.00 0.98
35: Hans-----	80	Fair Carbonate content Too clayey Water erosion	0.92 0.98 0.99	Poor Low strength Shrink-swell	0.00 0.87
36: Highcreek-----	45	Fair Carbonate content Water erosion	0.92 0.99	Fair Shrink-swell	0.87
Sterling-----	30	Fair Carbonate content Droughtiness	0.68 0.97	Fair Cobble content	0.66
37: Highcreek-----	40	Fair Carbonate content Water erosion	0.92 0.99	Fair Slope Shrink-swell	0.68 0.87
Sterling-----	35	Fair Carbonate content Droughtiness	0.68 0.97	Fair Cobble content Slope	0.66 0.68
38: Hillfield-----	50	Fair Low organic matter content Water erosion Carbonate content	0.12 0.68 0.80	Fair Slope	0.32
Kucera-----	30	Fair Water erosion	0.68	Fair Low strength Slope	0.22 0.92
39: Hillfield-----	65	Fair Low organic matter content Water erosion Carbonate content	0.12 0.68 0.80	Poor Slope	0.00
Kucera-----	20	Fair Water erosion	0.68	Poor Slope Low strength	0.00 0.22
40: Hondoho-----	35	Fair Cobble content Low organic matter content Carbonate content Droughtiness	0.48 0.50 0.80 0.99	Poor Slope Cobble content	0.00 0.07

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
40: Calpac-----	20	Fair Cobble content Droughtiness Stone content	 0.06 0.76 0.98	Poor Slope Cobble content Shrink-swell	 0.00 0.00 0.92
Lizdale-----	20	Poor Carbonate content Droughtiness	 0.00 0.77	Poor Slope	 0.00
41: Hondoho-----	35	Fair Cobble content Low organic matter content Carbonate content Droughtiness	 0.48 0.50 0.80 0.99	Fair Cobble content Slope	 0.07 0.32
Hymas-----	25	Poor Droughtiness Carbonate content Depth to bedrock Cobble content Stone content	 0.00 0.00 0.00 0.01 0.50	Poor Depth to bedrock Slope Cobble content Stone content	 0.00 0.32 0.46 0.99
Pavohroo-----	20	Fair Too acid	 0.32	Fair Slope	 0.32
42: Hondoho-----	35	Fair Cobble content Low organic matter content Carbonate content Droughtiness	 0.48 0.50 0.80 0.99	Poor Slope Cobble content	 0.00 0.07
Hymas-----	25	Poor Droughtiness Carbonate content Depth to bedrock Cobble content Stone content	 0.00 0.00 0.00 0.01 0.50	Poor Depth to bedrock Slope Cobble content Stone content	 0.00 0.00 0.46 0.99
Pavohroo-----	20	Fair Too acid	 0.32	Poor Slope	 0.00
43: Hondoho-----	35	Fair Cobble content Low organic matter content Carbonate content Droughtiness	 0.48 0.50 0.80 0.99	Poor Slope Cobble content	 0.00 0.07
Ridgecrest-----	30	Poor Carbonate content Cobble content Droughtiness Depth to bedrock	 0.00 0.03 0.11 0.90	Poor Depth to bedrock Cobble content Slope	 0.00 0.00 0.00

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
43: Hades-----	20	Fair Water erosion	0.99	Poor Low strength Slope	0.00 0.00
44: Hutchley-----	30	Poor Droughtiness Depth to bedrock Stone content Too clayey Cobble content	0.00 0.00 0.27 0.98 0.99	Poor Depth to bedrock Slope Shrink-swell Stone content	0.00 0.18 0.87 0.96
McCarey-----	25	Fair Depth to bedrock Droughtiness Stone content Carbonate content Water erosion	0.05 0.49 0.69 0.92 0.99	Poor Depth to bedrock Low strength Slope Shrink-swell Stone content	0.00 0.00 0.18 0.87 0.97
Araveton-----	25	Fair Carbonate content Water erosion	0.68 0.99	Fair Slope Shrink-swell	0.18 0.87
45: Hymas-----	35	Poor Droughtiness Carbonate content Depth to bedrock Cobble content Stone content	0.00 0.00 0.00 0.01 0.50	Poor Depth to bedrock Slope Cobble content Stone content	0.00 0.00 0.46 0.99
Calpac-----	25	Fair Cobble content Droughtiness Stone content	0.06 0.76 0.98	Poor Slope Cobble content Shrink-swell	0.00 0.00 0.92
Ireland-----	20	Poor Droughtiness Cobble content Depth to bedrock Stone content	0.00 0.00 0.35 0.91	Poor Depth to bedrock Slope Cobble content Stone content	0.00 0.00 0.00 0.99
46: Hymas-----	30	Poor Droughtiness Carbonate content Depth to bedrock Cobble content Stone content	0.00 0.00 0.00 0.01 0.50	Poor Depth to bedrock Slope Cobble content Stone content	0.00 0.00 0.46 0.99
Northwater-----	30	Fair Too acid Low organic matter content	0.50 0.88	Poor Slope Shrink-swell	0.00 0.99
Clayburn-----	20	Fair Water erosion	0.90	Poor Low strength Slope Shrink-swell	0.00 0.00 0.96

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
47: Hymas-----	45	Poor Droughtiness Carbonate content Depth to bedrock Cobble content Stone content	 0.00 0.00 0.00 0.01 0.50	Poor Depth to bedrock Slope Cobble content Stone content	 0.00 0.00 0.46 0.99
Povey-----	30	Fair Cobble content	 0.96	Poor Slope Cobble content	 0.00 0.26
48: Hymas-----	35	Poor Droughtiness Carbonate content Depth to bedrock Cobble content Stone content	 0.00 0.00 0.00 0.01 0.50	Poor Depth to bedrock Slope Cobble content Stone content	 0.00 0.00 0.46 0.99
Povey-----	25	Fair Cobble content	 0.96	Poor Slope Cobble content	 0.00 0.26
Pavohroo-----	20	Fair Too acid	 0.32	Poor Slope	 0.00
49: Inkom-----	85	Fair Carbonate content Water erosion	 0.16 0.90	Poor Wetness depth Low strength Shrink-swell	 0.00 0.00 0.87
50: Iphil-----	50	Fair Water erosion Carbonate content	 0.68 0.68	Good	
Ririe-----	20	Fair Sodium content Water erosion Carbonate content Low organic matter content	 0.22 0.37 0.68 0.88	Good	
Watercanyon-----	15	Fair Water erosion Carbonate content Low organic matter content Sodium content	 0.37 0.68 0.88 0.90	Good	
51: Ireland-----	40	Poor Droughtiness Cobble content Depth to bedrock Stone content	 0.00 0.00 0.35 0.91	Poor Depth to bedrock Slope Cobble content Stone content	 0.00 0.00 0.00 0.99

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
51: Calpac-----	35	Fair Cobble content Droughtiness Stone content	 0.06 0.76 0.98	Poor Slope Cobble content Shrink-swell	 0.00 0.00 0.92
52: Jensen-----	80	Fair Water erosion	 0.99	Fair Shrink-swell	 0.98
53: Jensen-----	80	Fair Water erosion	 0.99	Fair Shrink-swell	 0.98
54: Jensen-----	30	Fair Water erosion	 0.99	Fair Shrink-swell	 0.98
Iphil-----	25	Fair Water erosion Carbonate content	 0.68 0.68	Good	
Wursten-----	25	Fair Sodium content Low organic matter content Carbonate content	 0.40 0.50 0.92	Good	
55: Jovine-----	80	Fair Water erosion	 0.99	Poor Low strength	 0.00
56: Justesen-----	75	Fair Water erosion	 0.90	Poor Low strength Shrink-swell	 0.00 0.87
57: Justesen-----	75	Fair Water erosion	 0.90	Poor Low strength Shrink-swell Slope	 0.00 0.87 0.98
58: Justesen-----	50	Fair Water erosion	 0.90	Poor Low strength Shrink-swell Slope	 0.00 0.87 0.98
Ririe-----	30	Fair Sodium content Water erosion Carbonate content Low organic matter content	 0.22 0.37 0.68 0.88	Fair Slope	 0.98
Buist-----	15	Fair Carbonate content Low organic matter content	 0.32 0.88	Fair Slope	 0.98

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
59: Kearns-----	80	Fair Low organic matter content Water erosion	0.88 0.90	Fair Low strength	0.78
60: Kearns-----	75	Fair Low organic matter content Water erosion	0.88 0.90	Fair Low strength	0.78
61: Kidman-----	90	Poor Too alkaline Carbonate content Low organic matter content	0.00 0.80 0.88	Good	
62: Kidman-----	60	Poor Too alkaline Carbonate content Low organic matter content	0.00 0.80 0.88	Good	
Preston-----	25	Poor Too sandy Wind erosion Droughtiness Low organic matter content Sodium content	0.00 0.00 0.02 0.88 0.97	Good	
63: Kucera-----	85	Fair Water erosion	0.68	Fair Low strength	0.22
64: Lagonot-----	90	Poor Too alkaline Sodium content Carbonate content Water erosion	0.00 0.60 0.68 0.99	Poor Low strength Shrink-swell Wetness depth	0.00 0.87 0.91
65: Langless-----	85	Poor Carbonate content Sodium content Too acid	0.00 0.00 0.32	Poor Low strength Wetness depth	0.00 0.04
66: Langless-----	55	Poor Carbonate content Sodium content Too acid	0.00 0.00 0.32	Poor Low strength Wetness depth	0.00 0.04
Logan-----	30	Fair Sodium content Too acid Carbonate content	0.22 0.50 0.68	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.87

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
67: Lanoak-----	90	Fair Water erosion	0.99	Poor Low strength	0.00
68: Lanoak-----	90	Fair Water erosion	0.99	Poor Low strength Slope	0.00 0.32
69: Lanoak-----	45	Fair Water erosion	0.99	Poor Low strength	0.00
Hondoho-----	35	Fair		Fair	
		Cobble content	0.48	Cobble content	0.07
		Low organic matter content	0.50	Shrink-swell	0.87
		Carbonate content	0.80		
70: Logan-----	95	Fair Sodium content Too acid Carbonate content	0.22 0.50 0.68	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.87
71: Lonigan-----	45	Fair Droughtiness Carbonate content Depth to bedrock Low organic matter content	0.54 0.68 0.79 0.88	Poor Depth to bedrock Slope	0.00 0.00
Lizdale-----	35	Poor Carbonate content Droughtiness	0.00 0.77	Fair Slope	0.82
72: Lostine-----	75	Fair Water erosion	0.68	Poor Slope Low strength	0.00 0.78
73: Manila-----	85	Poor Too clayey Water erosion Carbonate content	0.00 0.90 0.97	Poor Low strength Shrink-swell	0.00 0.57
74: Manila-----	45	Poor Too clayey Water erosion Carbonate content	0.00 0.90 0.97	Poor Low strength Shrink-swell	0.00 0.57
Broadhead-----	30	Poor		Poor	
		Too clayey	0.00	Low strength	0.00
		Low organic matter content	0.88	Shrink-swell	0.12
		Water erosion	0.99		

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
75: Manila-----	45	Poor Too clayey Water erosion Carbonate content	 0.00 0.90 0.97	Poor Low strength Slope Shrink-swell	 0.00 0.32 0.57
Broadhead-----	30	Poor Too clayey Low organic matter content Water erosion	 0.00 0.88 0.99	Poor Low strength Shrink-swell Slope	 0.00 0.12 0.32
76: Manila-----	50	Poor Too clayey Water erosion Carbonate content	 0.00 0.90 0.97	Poor Low strength Slope Shrink-swell	 0.00 0.08 0.57
Lonigan-----	30	Fair Droughtiness Carbonate content Depth to bedrock Low organic matter content	 0.34 0.68 0.79 0.88	Poor Depth to bedrock Slope	 0.00 0.08
77: Manila-----	50	Poor Too clayey Water erosion Carbonate content	 0.00 0.90 0.97	Poor Low strength Shrink-swell	 0.00 0.57
Obnot-----	25	Poor Too clayey No stoniness limitation	 0.00 0.99	Poor Low strength Shrink-swell	 0.00 0.15
78: Manila-----	45	Poor Too clayey Water erosion Carbonate content	 0.00 0.90 0.97	Poor Low strength Shrink-swell	 0.00 0.57
Yago-----	40	Fair Cobble content Too clayey Carbonate content	 0.14 0.32 0.92	Poor Cobble content Low strength Shrink-swell	 0.00 0.00 0.39
79: Manila-----	45	Poor Too clayey Water erosion Carbonate content	 0.00 0.90 0.97	Poor Low strength Slope Shrink-swell	 0.00 0.32 0.57
Yago-----	35	Fair Cobble content Too clayey Carbonate content	 0.14 0.32 0.92	Poor Cobble content Low strength Slope Shrink-swell	 0.00 0.00 0.32 0.39

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
80: Mellor-----	50	Poor Sodium content Too alkaline Salinity Low organic matter content Carbonate content Water erosion	 0.00 0.00 0.50 0.88 0.92 0.99	Poor Low strength Shrink-swell	 0.00 0.87
Freedom-----	35	Fair Sodium content Carbonate content Water erosion Low organic matter content	 0.22 0.46 0.68 0.88	Poor Low strength Shrink-swell	 0.00 0.87
81: Neeley-----	90	Poor Sodium content Too alkaline Water erosion Carbonate content Low organic matter content	 0.00 0.00 0.37 0.80 0.88	Good	
82: Northwater-----	35	Fair Too acid Low organic matter content	 0.50 0.88	Poor Slope Shrink-swell	 0.00 0.99
Povey-----	30	Fair Cobble content	 0.96	Poor Slope Cobble content	 0.00 0.26
Pavohroo-----	15	Fair Too acid	 0.32	Poor Slope	 0.00
83: Parehat-----	90	Poor Sodium content Water erosion	 0.00 0.90	Poor Low strength Shrink-swell Wetness depth	 0.00 0.87 0.89
84: Parleys-----	80	Fair Low organic matter content Carbonate content Water erosion Too clayey	 0.12 0.46 0.68 0.98	Poor Low strength	 0.00
85: Parleys-----	85	Fair Low organic matter content Carbonate content Water erosion Too clayey	 0.12 0.46 0.68 0.98	Poor Low strength	 0.00

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
86: Parleys-----	50	Fair Low organic matter content Carbonate content Water erosion Too clayey	0.12 0.46 0.68 0.98	Poor Low strength	0.00
Welby-----	35	Poor Sodium content Carbonate content Water erosion	0.00 0.68 0.90	Good	
87: Parleys-----	60	Fair Low organic matter content Carbonate content Water erosion Too clayey	0.12 0.46 0.68 0.98	Poor Low strength	0.00
Wheelon-----	15	Fair Carbonate content Sodium content Water erosion Too clayey	0.46 0.60 0.90 0.98	Poor Low strength Shrink-swell	0.00 0.87
88: Pavohroo-----	45	Fair Too acid	0.32	Poor Slope	0.00
Povey-----	30	Fair Cobble content	0.96	Poor Slope Cobble content	0.00 0.26
89: Pavohroo-----	45	Fair Too acid	0.32	Poor Slope	0.00
Stines-----	30	Fair Droughtiness Low organic matter content Cobble content Stone content	0.61 0.88 0.96 0.99	Poor Slope Cobble content	0.00 0.83
Lonigan-----	20	Fair Droughtiness Carbonate content Depth to bedrock Low organic matter content	0.54 0.68 0.79 0.88	Poor Depth to bedrock Slope	0.00 0.00
90: Pits, gravel-----	100	Not rated		Not rated	
91: Povey-----	35	Fair Cobble content	0.96	Poor Slope Cobble content	0.00 0.26

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
91: Hades-----	30	Fair Water erosion	0.99	Poor Low strength Slope	0.00 0.00
Hondoho-----	25	Fair Cobble content Low organic matter content Carbonate content Droughtiness	0.48 0.50 0.80 0.99	Poor Slope Cobble content	0.00 0.07
92: Povey-----	45	Fair Cobble content	0.96	Poor Slope Cobble content	0.00 0.26
Ireland-----	25	Poor Droughtiness Cobble content Depth to bedrock Stone content	0.00 0.00 0.35 0.91	Poor Depth to bedrock Slope Cobble content Stone content	0.00 0.00 0.00 0.99
Calpac-----	15	Fair Cobble content Droughtiness Stone content	0.06 0.76 0.98	Poor Slope Cobble content Shrink-swell	0.00 0.00 0.92
93: Povey-----	45	Fair Cobble content	0.96	Poor Slope Cobble content	0.00 0.26
Pavohroo-----	30	Fair Too acid	0.32	Poor Slope	0.00
94: Povirt-----	85	Poor Too clayey Low organic matter content Water erosion	0.00 0.88 0.90	Poor Wetness depth Low strength Shrink-swell	0.00 0.00 0.12
95: Raldridge-----	75	Fair Low organic matter content Carbonate content Droughtiness Water erosion	0.88 0.92 0.98 0.99	Good	
96: Rexburg-----	85	Fair Water erosion Carbonate content Low organic matter content	0.37 0.80 0.88	Good	

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
97: Rexburg-----	50	Fair Water erosion Carbonate content Low organic matter content	 0.37 0.80 0.88	Good	
Arbone-----	25	Fair Low organic matter content Water erosion Carbonate content	 0.88 0.90 0.97	Good	
Ririe-----	15	Fair Sodium content Water erosion Carbonate content Low organic matter content	 0.22 0.37 0.68 0.88	Good	
98: Rexburg-----	40	Fair Water erosion Carbonate content Low organic matter content	 0.37 0.80 0.88	Fair Slope	0.68
Arbone-----	35	Fair Low organic matter content Water erosion Carbonate content	 0.88 0.90 0.97	Fair Slope	0.68
Ririe-----	15	Fair Sodium content Water erosion Carbonate content Low organic matter content	 0.22 0.37 0.68 0.88	Fair Slope	0.68
99: Rexburg-----	30	Fair Water erosion Carbonate content Low organic matter content	 0.37 0.80 0.88	Fair Slope	0.32
Iphil-----	25	Fair Water erosion Carbonate content	 0.68 0.68	Fair Slope	0.32
Watercanyon-----	25	Fair Water erosion Carbonate content Low organic matter content Sodium content	 0.37 0.68 0.88 0.90	Fair Slope	0.32

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
100: Rexburg-----	55	Fair Water erosion Carbonate content Low organic matter content	0.37 0.80 0.88	Good	
Lanoak-----	35	Fair Water erosion	0.99	Poor Low strength	0.00
101: Rexburg-----	55	Fair Water erosion Carbonate content Low organic matter content	0.37 0.80 0.88	Fair Slope	0.68
Lanoak-----	35	Fair Water erosion	0.99	Poor Low strength Slope	0.00 0.68
102: Rexburg-----	35	Fair Water erosion Carbonate content Low organic matter content	0.37 0.80 0.88	Good	
Lanoak-----	25	Fair Water erosion	0.99	Poor Low strength	0.00
Watercanyon-----	20	Fair Water erosion Carbonate content Low organic matter content Sodium content	0.37 0.68 0.88 0.90	Good	
103: Rexburg-----	50	Fair Water erosion Carbonate content Low organic matter content	0.37 0.80 0.88	Good	
Ririe-----	20	Fair Sodium content Water erosion Carbonate content Low organic matter content	0.22 0.37 0.68 0.88	Good	
Kucera-----	15	Fair Water erosion	0.68	Fair Low strength	0.22
104: Rexburg-----	40	Fair Water erosion Carbonate content Low organic matter content	0.37 0.80 0.88	Fair Slope	0.32

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
104: Thatcher-----	25	Fair Water erosion Carbonate content Too clayey	 0.68 0.92 0.95	Poor Low strength Slope	 0.00 0.32
Ririe-----	20	Fair Sodium content Water erosion Carbonate content Low organic matter content	 0.22 0.37 0.68 0.88	Fair Slope	 0.32
105: Rexburg-----	35	Fair Water erosion Carbonate content Low organic matter content	 0.37 0.80 0.88	Fair Slope	 0.98
Watercanyon-----	30	Fair Water erosion Carbonate content Low organic matter content Sodium content	 0.37 0.68 0.88 0.90	Fair Slope	 0.98
Lanoak-----	20	Fair Water erosion	 0.99	Poor Low strength Slope	 0.00 0.98
106: Ridgecrest-----	45	Poor Carbonate content Cobble content Droughtiness Depth to bedrock	 0.00 0.03 0.11 0.90	Poor Depth to bedrock Slope Cobble content	 0.00 0.00 0.00
Hondoho-----	35	Fair Cobble content Low organic matter content Carbonate content Droughtiness	 0.48 0.50 0.80 0.99	Poor Slope Cobble content	 0.00 0.07
107: Ridgecrest-----	35	Poor Carbonate content Cobble content Droughtiness Depth to bedrock	 0.00 0.03 0.11 0.90	Poor Depth to bedrock Slope Cobble content	 0.00 0.00 0.00
Hondoho-----	30	Fair Cobble content Low organic matter content Carbonate content Droughtiness	 0.48 0.50 0.80 0.99	Poor Slope Cobble content	 0.00 0.07

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value
107: Hymas-----	15	Poor Droughtiness Carbonate content Depth to bedrock Cobble content Stone content	 0.00 0.00 0.00 0.01 0.50	Poor Depth to bedrock Slope Cobble content Stone content	 0.00 0.00 0.46 0.99
108: Ridgecrest-----	35	Poor Carbonate content Cobble content Droughtiness Depth to bedrock	 0.00 0.03 0.11 0.90	Poor Depth to bedrock Slope Cobble content	 0.00 0.00 0.00
Hondoho-----	30	Fair Cobble content Low organic matter content Carbonate content Droughtiness	 0.48 0.50 0.80 0.99	Poor Slope Cobble content	 0.00 0.07
Lizdale-----	20	Poor Carbonate content Droughtiness	 0.00 0.77	Poor Slope	 0.00
109: Ridgecrest-----	45	Poor Carbonate content Cobble content Droughtiness Depth to bedrock	 0.00 0.03 0.11 0.90	Poor Depth to bedrock Slope Cobble content	 0.00 0.00 0.00
Hymas-----	30	Poor Droughtiness Carbonate content Depth to bedrock Cobble content Stone content	 0.00 0.00 0.00 0.01 0.50	Poor Depth to bedrock Slope Cobble content Stone content	 0.00 0.00 0.46 0.99
110: Ririe-----	50	Fair Sodium content Water erosion Carbonate content Low organic matter content	 0.22 0.37 0.68 0.88	Good	
Buist-----	25	Fair Carbonate content Low organic matter content	 0.32 0.88	Good	
111: Ririe-----	50	Fair Sodium content Water erosion Carbonate content Low organic matter content	 0.22 0.37 0.68 0.88	Good	

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
111: Cedarhill-----	25	Fair Carbonate content Droughtiness Cobble content	 0.68 0.75 0.94	Fair Cobble content	 0.94
112: Ririe-----	50	Fair Sodium content Water erosion Carbonate content Low organic matter content	 0.22 0.37 0.68 0.88	Fair Slope	 0.98
Cedarhill-----	25	Fair Carbonate content Droughtiness Cobble content	 0.68 0.75 0.94	Fair Cobble content Slope	 0.94 0.98
113: Ririe-----	50	Fair Sodium content Water erosion Carbonate content Low organic matter content	 0.22 0.37 0.68 0.88	Fair Slope	 0.98
Hondoho-----	25	Fair Cobble content Low organic matter content Carbonate content Droughtiness	 0.48 0.50 0.80 0.99	Fair Cobble content Slope	 0.07 0.98
114: Ririe-----	40	Fair Sodium content Water erosion Carbonate content Low organic matter content	 0.22 0.37 0.68 0.88	Good	
Iphil-----	25	Fair Water erosion Carbonate content	 0.68 0.68	Good	
Kucera-----	20	Fair Water erosion	 0.68	Fair Low strength	 0.22
115: Ririe-----	30	Fair Sodium content Water erosion Carbonate content Low organic matter content	 0.22 0.37 0.68 0.88	Good	
Iphil-----	25	Fair Water erosion Carbonate content	 0.68 0.68	Good	

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
115: Rexburg-----	25	Fair Water erosion Carbonate content Low organic matter content	 0.37 0.80 0.88	Good	
116: Ririe-----	45	Fair Sodium content Water erosion Carbonate content Low organic matter content	 0.22 0.37 0.68 0.88	Good	
Rexburg-----	40	Fair Water erosion Carbonate content Low organic matter content	 0.37 0.80 0.88	Good	
117: Ririe-----	50	Fair Sodium content Water erosion Carbonate content Low organic matter content	 0.22 0.37 0.68 0.88	Good	
Watercanyon-----	25	Fair Water erosion Carbonate content Low organic matter content Sodium content	 0.37 0.68 0.88 0.90	Good	
118: Ririe-----	45	Fair Sodium content Water erosion Carbonate content Low organic matter content	 0.22 0.37 0.68 0.88	Fair Slope	0.32
Watercanyon-----	35	Fair Water erosion Carbonate content Low organic matter content Sodium content	 0.37 0.68 0.88 0.90	Fair Slope	0.32
119: Samaria-----	90	Fair Low organic matter content Sodium content Carbonate content Water erosion	 0.12 0.22 0.32 0.90	Good	

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
120: Samaria-----	90	Fair Low organic matter content Sodium content Carbonate content Water erosion	0.12 0.22 0.32 0.90	Good	
121: Samaria-----	55	Fair Low organic matter content Sodium content Carbonate content Water erosion	0.12 0.22 0.32 0.90	Good	
Pollynot-----	30	Fair Carbonate content Water erosion	0.68 0.99	Good	
122: Samaria-----	50	Fair Low organic matter content Sodium content Carbonate content Water erosion	0.12 0.22 0.32 0.90	Good	
Sterling-----	35	Fair Carbonate content Droughtiness	0.68 0.97	Fair Cobble content	0.66
123: Sterling-----	80	Fair Carbonate content Droughtiness	0.68 0.97	Fair Cobble content Slope	0.66 0.98
124: Thatcher-----	85	Fair Water erosion Carbonate content Too clayey	0.68 0.92 0.95	Poor Low strength	0.00
125: Thatcher-----	45	Fair Water erosion Carbonate content Too clayey	0.68 0.92 0.95	Poor Low strength Slope	0.00 0.32
Jensen-----	35	Fair Water erosion	0.99	Fair Slope Shrink-swell	0.32 0.98
126: Freedom-----	75	Fair Sodium content Carbonate content Water erosion Low organic matter content	0.22 0.46 0.68 0.88	Poor Low strength Shrink-swell	0.00 0.87

Table 11b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material	Potential source of roadfill		
		Rating class and limiting features	Value	Rating class and limiting features	Value
127: Tickason-----	80	Fair Carbonate content	0.92	Good	
128: Tickason-----	85	Fair Carbonate content	0.92	Good	
129: Tirod-----	85	Fair Low organic matter content Carbonate content	0.88 0.92	Fair Low strength Shrink-swell	0.22 0.87
130: Toefoot-----	90	Fair Water erosion	0.90	Good	
131: Welby-----	65	Poor Sodium content Carbonate content Water erosion	0.00 0.68 0.90	Good	
Parleys-----	20	Fair Low organic matter content Carbonate content Water erosion Too clayey	0.12 0.46 0.68 0.98	Poor Low strength	0.00
132: Wursten-----	85	Fair Sodium content Low organic matter content Carbonate content	0.40 0.50 0.92	Good	
133: Yago-----	40	Fair Cobble content Too clayey Carbonate content	0.14 0.32 0.92	Poor Cobble content Slope Low strength Shrink-swell	0.00 0.00 0.00 0.39
Manila-----	35	Poor Too clayey Water erosion Carbonate content	0.00 0.90 0.97	Poor Low strength Slope Shrink-swell	0.00 0.00 0.57
134: Water-----	100	Not rated		Not rated	

Table 12.--Water Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1: Araveton-----	50	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.60	Very limited Depth to water	1.00
Hades-----	25	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.02	Very limited Depth to water	1.00
2: Arbone-----	75	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
3: Arbone-----	90	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
4: Arbone-----	85	Somewhat limited Seepage Slope	0.72 0.04	Very limited Piping	1.00	Very limited Depth to water	1.00
5: Arbone-----	35	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
Hondoho-----	30	Very limited Seepage	1.00	Somewhat limited Large stones content	0.13	Very limited Depth to water	1.00
Cedarhill-----	20	Very limited Seepage	1.00	Somewhat limited Seepage	0.25	Very limited Depth to water	1.00
6: Arbone-----	45	Somewhat limited Seepage Slope	0.72 0.15	Very limited Piping	1.00	Very limited Depth to water	1.00
Hondoho-----	25	Very limited Seepage Slope	1.00 0.15	Somewhat limited Large stones content	0.13	Very limited Depth to water	1.00
Cedarhill-----	20	Very limited Seepage Slope	1.00 0.15	Somewhat limited Seepage	0.25	Very limited Depth to water	1.00
7: Bayhook-----	90	Somewhat limited Seepage	0.04	Very limited Piping	1.00	Very limited Depth to water	1.00
8: Bayhook-----	55	Somewhat limited Seepage	0.04	Very limited Piping	1.00	Very limited Depth to water	1.00
Ecur-----	35	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.04	Very limited Depth to water	1.00

Table 12.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
9: Bingham-----	90	Very limited Seepage	1.00	Somewhat limited Seepage	0.25	Very limited Depth to water	1.00
10: Bingham-----	45	Very limited Seepage	1.00	Somewhat limited Seepage	0.25	Very limited Depth to water	1.00
Tirod-----	35	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.29	Very limited Depth to water	1.00
11: Bloor-----	50	Very limited Seepage	1.00	Very limited Piping Salinity	1.00 1.00	Very limited Depth to water	1.00
Brinnum-----	35	Somewhat limited Seepage	0.04	Very limited Depth to saturated zone Salinity Piping	1.00 1.00 1.00	Very limited Salinity and saturated zone Slow refill Cutbanks cave	1.00 0.96 0.10
12: Bothwell-----	80	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.02	Very limited Depth to water	1.00
13: Bothwell-----	35	Somewhat limited Seepage Slope	0.72 0.04	Somewhat limited Piping	0.02	Very limited Depth to water	1.00
Hades-----	30	Somewhat limited Seepage Slope	0.72 0.04	Somewhat limited Piping	0.02	Very limited Depth to water	1.00
Justesen-----	20	Somewhat limited Seepage Slope	0.72 0.04	Somewhat limited Piping	0.31	Very limited Depth to water	1.00
14: Brinnum-----	30	Somewhat limited Seepage	0.04	Very limited Depth to saturated zone Salinity Piping	1.00 1.00 1.00	Very limited Salinity and saturated zone Slow refill Cutbanks cave	1.00 0.96 0.10
Logan-----	30	Somewhat limited Seepage	0.04	Very limited Depth to saturated zone Piping	1.00 1.00	Somewhat limited Slow refill Cutbanks cave	0.96 0.10
Langless-----	25	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 1.00	Somewhat limited Slow refill Cutbanks cave Salinity and saturated zone	0.28 0.10 0.06
15: Buckboard-----	80	Somewhat limited Seepage	0.54	Somewhat limited Piping	0.59	Very limited Depth to water	1.00

Table 12.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
16: Buist-----	75	Very limited Seepage Slope	1.00 0.28	Somewhat limited Seepage	0.50	Very limited Depth to water	1.00
17: Calpac-----	30	Very limited Slope Seepage	1.00 0.72	Somewhat limited Large stones content Seepage	0.85 0.31	Very limited Depth to water	1.00
Ridgecrest-----	30	Very limited Seepage Slope Depth to bedrock	1.00 1.00 0.69	Somewhat limited Large stones content Thin layer Seepage	0.97 0.70 0.25	Very limited Depth to water	1.00
Ireland-----	25	Very limited Slope Depth to bedrock Seepage	1.00 0.69 0.72	Very limited Large stones content Thin layer	1.00 0.91	Very limited Depth to water	1.00
18: Cedarhill-----	85	Very limited Seepage	1.00	Somewhat limited Seepage	0.25	Very limited Depth to water	1.00
19: Cedarhill-----	75	Very limited Seepage Slope	1.00 0.15	Somewhat limited Seepage	0.25	Very limited Depth to water	1.00
20: Cedarhill-----	45	Very limited Seepage Slope	1.00 0.82	Somewhat limited Seepage	0.25	Very limited Depth to water	1.00
Hymas-----	30	Very limited Depth to bedrock Slope Seepage	1.00 0.82 0.19	Very limited Thin layer Large stones content Seepage	1.00 1.00 0.25	Very limited Depth to water	1.00
21: Cedarhill-----	40	Very limited Seepage Slope	1.00 0.15	Somewhat limited Seepage	0.25	Very limited Depth to water	1.00
Lostine-----	40	Very limited Seepage Slope	1.00 0.15	Very limited Piping	0.99	Very limited Depth to water	1.00
22: Collinston-----	85	Somewhat limited Seepage	0.04	Somewhat limited Piping	0.28	Very limited Depth to water	1.00
23: Collinston-----	45	Somewhat limited Seepage	0.04	Somewhat limited Piping	0.28	Very limited Depth to water	1.00
Kearns-----	30	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.86	Very limited Depth to water	1.00

Table 12.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
24: Copenhagen-----	35	Very limited Depth to bedrock Slope	1.00 0.55	Very limited Thin layer Seepage	1.00 0.25	Very limited Depth to water	1.00
Lonigan-----	30	Very limited Seepage Slope Depth to bedrock	1.00 0.55 0.06	Somewhat limited Thin layer	0.77	Very limited Depth to water	1.00
Manila-----	20	Somewhat limited Seepage Slope	0.72 0.55	Not limited		Very limited Depth to water	1.00
25: Darkbull-----	40	Very limited Seepage Slope	1.00 0.04	Very limited Piping Seepage	1.00 0.62	Very limited Depth to water	1.00
Pyrat-----	30	Very limited Seepage Slope	1.00 0.04	Somewhat limited Seepage	0.62	Very limited Depth to water	1.00
Ecur-----	25	Very limited Seepage Slope	1.00 0.04	Very limited Piping Seepage	1.00 0.04	Very limited Depth to water	1.00
26: DeJarnet-----	90	Very limited Seepage	1.00	Somewhat limited Seepage	0.62	Very limited Depth to water	1.00
27: Dumps, mine-----	100	Not rated		Not rated		Not rated	
28: Ecur-----	85	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.04	Very limited Depth to water	1.00
29: Ecur-----	45	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.04	Very limited Depth to water	1.00
Darkbull-----	30	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.62	Very limited Depth to water	1.00
30: Elevator-----	80	Somewhat limited Seepage	0.02	Not limited		Very limited Depth to water	1.00
31: Elevator-----	40	Somewhat limited Seepage	0.02	Not limited		Very limited Depth to water	1.00
Jensen-----	35	Somewhat limited Seepage	0.72	Somewhat limited Seepage	0.06	Very limited Depth to water	1.00

Table 12.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
32: Elevators-----	40	Somewhat limited Seepage	0.02	Not limited		Very limited Depth to water	1.00
Jensen-----	35	Somewhat limited Seepage	0.72	Somewhat limited Seepage	0.06	Very limited Depth to water	1.00
33: Fridlo-----	75	Somewhat limited Seepage	0.04	Very limited Piping Salinity	1.00 0.50	Somewhat limited Depth to saturated zone Slow refill Salinity and saturated zone Cutbanks cave	0.98 0.96 0.78 0.10
34: Goosenawt-----	75	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.28	Very limited Depth to water	1.00
35: Hans-----	80	Not limited		Somewhat limited Piping	0.01	Very limited Depth to water	1.00
36: Highcreek-----	45	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.52	Very limited Depth to water	1.00
Sterling-----	30	Somewhat limited Seepage	0.72	Somewhat limited Seepage Large stones content	0.25 0.04	Very limited Depth to water	1.00
37: Highcreek-----	40	Somewhat limited Seepage Slope	0.72 0.10	Somewhat limited Piping	0.52	Very limited Depth to water	1.00
Sterling-----	35	Somewhat limited Seepage Slope	0.72 0.10	Somewhat limited Seepage Large stones content	0.25 0.04	Very limited Depth to water	1.00
38: Hillfield-----	50	Somewhat limited Seepage Slope	0.72 0.15	Very limited Piping	1.00	Very limited Depth to water	1.00
Kucera-----	30	Somewhat limited Seepage Slope	0.72 0.06	Very limited Piping	1.00	Very limited Depth to water	1.00
39: Hillfield-----	65	Somewhat limited Slope Seepage	0.88 0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
Kucera-----	20	Somewhat limited Slope Seepage	0.88 0.72	Very limited Piping	1.00	Very limited Depth to water	1.00

Table 12.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
40:							
Hondoho-----	35	Very limited Seepage Slope	1.00 1.00	Somewhat limited Large stones content	0.13	Very limited Depth to water	1.00
Calpac-----	20	Very limited Slope Seepage	1.00 0.72	Somewhat limited Large stones content Seepage	0.85 0.31	Very limited Depth to water	1.00
Lizdale-----	20	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage	0.62	Very limited Depth to water	1.00
41:							
Hondoho-----	35	Very limited Seepage Slope	1.00 0.15	Somewhat limited Large stones content	0.13	Very limited Depth to water	1.00
Hymas-----	25	Very limited Depth to bedrock Seepage Slope	1.00 0.19 0.15	Very limited Thin layer Large stones content Seepage	1.00 1.00 0.25	Very limited Depth to water	1.00
Pavohroo-----	20	Somewhat limited Seepage Slope	0.72 0.15	Somewhat limited Piping	0.71	Very limited Depth to water	1.00
42:							
Hondoho-----	35	Very limited Seepage Slope	1.00 0.97	Somewhat limited Large stones content	0.13	Very limited Depth to water	1.00
Hymas-----	25	Very limited Depth to bedrock Slope Seepage	1.00 0.97 0.19	Very limited Thin layer Large stones content Seepage	1.00 1.00 0.25	Very limited Depth to water	1.00
Pavohroo-----	20	Somewhat limited Slope Seepage	0.97 0.72	Somewhat limited Piping	0.71	Very limited Depth to water	1.00
43:							
Hondoho-----	35	Very limited Seepage Slope	1.00 0.55	Somewhat limited Large stones content	0.13	Very limited Depth to water	1.00
Ridgecrest-----	30	Very limited Seepage Depth to bedrock Slope	1.00 0.69 0.55	Somewhat limited Large stones content Thin layer Seepage	0.97 0.70 0.25	Very limited Depth to water	1.00
Hades-----	20	Somewhat limited Seepage Slope	0.72 0.55	Somewhat limited Piping	0.02	Very limited Depth to water	1.00

Table 12.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
44: Hutchley-----	30	Very limited Depth to bedrock Slope	1.00 0.18	Very limited Thin layer Large stones content	1.00 0.55	Very limited Depth to water	1.00
McCarey-----	25	Somewhat limited Depth to bedrock Slope Seepage	0.99 0.18 0.04	Somewhat limited Thin layer Piping	0.99 0.45	Very limited Depth to water	1.00
Araveton-----	25	Somewhat limited Seepage Slope	0.72 0.18	Somewhat limited Piping	0.60	Very limited Depth to water	1.00
45: Hymas-----	35	Very limited Depth to bedrock Slope Seepage	1.00 1.00 0.19	Very limited Thin layer Large stones content Seepage	1.00 1.00 0.25	Very limited Depth to water	1.00
Calpac-----	25	Very limited Slope Seepage	1.00 0.72	Somewhat limited Large stones content Seepage	0.85 0.31	Very limited Depth to water	1.00
Ireland-----	20	Very limited Slope Depth to bedrock Seepage	1.00 0.91 0.72	Very limited Large stones content Thin layer	1.00 0.91	Very limited Depth to water	1.00
46: Hymas-----	30	Very limited Depth to bedrock Slope Seepage	1.00 0.88 0.19	Very limited Thin layer Large stones content Seepage	1.00 1.00 0.25	Very limited Depth to water	1.00
Northwater-----	30	Somewhat limited Slope Seepage	0.88 0.72	Not limited		Very limited Depth to water	1.00
Clayburn-----	20	Somewhat limited Slope Seepage	0.88 0.72	Somewhat limited Piping	0.20	Very limited Depth to water	1.00
47: Hymas-----	45	Very limited Depth to bedrock Slope Seepage	1.00 0.97 0.19	Very limited Thin layer Large stones content Seepage	1.00 1.00 0.25	Very limited Depth to water	1.00
Povey-----	30	Very limited Seepage Slope	1.00 0.97	Somewhat limited Seepage Large stones content	0.38 0.07	Very limited Depth to water	1.00

Table 12.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
48: Hymas-----	35	Very limited Depth to bedrock Slope Seepage	1.00 1.00 0.19	Very limited Thin layer Large stones content Seepage	1.00 1.00 0.25	Very limited Depth to water	1.00
Povey-----	25	Very limited Seepage Slope	1.00 1.00	Somewhat limited Seepage Large stones content	0.38 0.07	Very limited Depth to water	1.00
Pavohroo-----	20	Very limited Slope Seepage	1.00 0.72	Somewhat limited Piping	0.71	Very limited Depth to water	1.00
49: Inkom-----	85	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.59	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
50: Iphil-----	50	Somewhat limited Seepage Slope	0.72 0.02	Very limited Piping	1.00	Very limited Depth to water	1.00
Ririe-----	20	Somewhat limited Seepage Slope	0.72 0.02	Very limited Piping	1.00	Very limited Depth to water	1.00
Watercanyon-----	15	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
51: Ireland-----	40	Somewhat limited Slope Depth to bedrock Seepage	0.97 0.91 0.72	Very limited Large stones content Thin layer	1.00 0.91	Very limited Depth to water	1.00
Calpac-----	35	Somewhat limited Slope Seepage	0.97 0.72	Somewhat limited Large stones content Seepage	0.85 0.31	Very limited Depth to water	1.00
52: Jensen-----	80	Somewhat limited Seepage	0.72	Somewhat limited Seepage	0.06	Very limited Depth to water	1.00
53: Jensen-----	80	Somewhat limited Seepage	0.72	Somewhat limited Seepage	0.06	Very limited Depth to water	1.00
54: Jensen-----	30	Somewhat limited Seepage	0.72	Somewhat limited Seepage	0.06	Very limited Depth to water	1.00
Iphil-----	25	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
Wursten-----	25	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00

Table 12.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
55: Jovine-----	80	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.98	Very limited Depth to water	1.00
56: Justesen-----	75	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.31	Very limited Depth to water	1.00
57: Justesen-----	75	Somewhat limited Seepage Slope	0.72 0.04	Somewhat limited Piping	0.31	Very limited Depth to water	1.00
58: Justesen-----	50	Somewhat limited Seepage Slope	0.72 0.04	Somewhat limited Piping	0.31	Very limited Depth to water	1.00
Ririe-----	30	Somewhat limited Seepage Slope	0.72 0.04	Very limited Piping	1.00	Very limited Depth to water	1.00
Buist-----	15	Very limited Seepage Slope	1.00 0.04	Somewhat limited Seepage	0.50	Very limited Depth to water	1.00
59: Kearns-----	80	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.86	Very limited Depth to water	1.00
60: Kearns-----	75	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.86	Very limited Depth to water	1.00
61: Kidman-----	90	Very limited Seepage	1.00	Somewhat limited Piping Seepage	0.10 0.01	Very limited Depth to water	1.00
62: Kidman-----	60	Very limited Seepage	1.00	Somewhat limited Piping Seepage	0.10 0.01	Very limited Depth to water	1.00
Preston-----	25	Very limited Seepage	1.00	Somewhat limited Seepage Piping	0.34 0.02	Very limited Depth to water	1.00
63: Kucera-----	85	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
64: Lagonot-----	90	Somewhat limited Seepage	0.72	Very limited Piping Depth to saturated zone	1.00 0.84	Somewhat limited Slow refill Cutbanks cave Depth to saturated zone	0.28 0.10 0.07

Table 12.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
65: Langless-----	85	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 1.00	Somewhat limited Slow refill Cutbanks cave Salinity and saturated zone	0.28 0.10 0.06
66: Langless-----	55	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 1.00	Somewhat limited Slow refill Cutbanks cave Salinity and saturated zone	0.28 0.10 0.06
Logan-----	30	Somewhat limited Seepage	0.04	Very limited Depth to saturated zone Piping	1.00 1.00	Somewhat limited Slow refill Cutbanks cave	0.96 0.10
67: Lanoak-----	90	Somewhat limited Seepage	0.72	Very limited Piping	0.99	Very limited Depth to water	1.00
68: Lanoak-----	90	Somewhat limited Seepage Slope	0.72 0.15	Very limited Piping	0.99	Very limited Depth to water	1.00
69: Lanoak-----	45	Somewhat limited Seepage Slope	0.72 0.01	Very limited Piping	0.99	Very limited Depth to water	1.00
Hondoho-----	35	Somewhat limited Seepage Slope	0.72 0.03	Somewhat limited Large stones content	0.13	Very limited Depth to water	1.00
70: Logan-----	95	Somewhat limited Seepage	0.04	Very limited Depth to saturated zone Piping	1.00 1.00	Somewhat limited Slow refill Cutbanks cave	0.96 0.10
71: Lonigan-----	45	Very limited Seepage Slope Depth to bedrock	1.00 0.32 0.06	Somewhat limited Thin layer	0.77	Very limited Depth to water	1.00
Lizdale-----	35	Very limited Seepage Slope	1.00 0.08	Somewhat limited Seepage	0.62	Very limited Depth to water	1.00
72: Lostine-----	75	Very limited Seepage Slope	1.00 0.28	Very limited Piping	0.99	Very limited Depth to water	1.00
73: Manila-----	85	Somewhat limited Seepage	0.72	Not limited		Very limited Depth to water	1.00

Table 12.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
74: Manila-----	45	Somewhat limited Seepage	0.72	Not limited		Very limited Depth to water	1.00
Broadhead-----	30	Not limited		Somewhat limited Hard to pack	0.40	Very limited Depth to water	1.00
75: Manila-----	45	Somewhat limited Seepage Slope	0.72 0.15	Not limited		Very limited Depth to water	1.00
Broadhead-----	30	Somewhat limited Slope	0.15	Somewhat limited Hard to pack	0.40	Very limited Depth to water	1.00
76: Manila-----	50	Somewhat limited Seepage Slope	0.72 0.21	Not limited		Very limited Depth to water	1.00
Lonigan-----	30	Very limited Seepage Slope Depth to bedrock	1.00 0.21 0.06	Somewhat limited Thin layer	0.77	Very limited Depth to water	1.00
77: Manila-----	50	Somewhat limited Seepage	0.72	Not limited		Very limited Depth to water	1.00
Obnot-----	25	Somewhat limited Seepage	0.04	Somewhat limited Hard to pack	0.35	Very limited Depth to water	1.00
78: Manila-----	45	Somewhat limited Seepage	0.72	Not limited		Very limited Depth to water	1.00
Yago-----	40	Not limited		Somewhat limited Large stones content	0.98	Very limited Depth to water	1.00
79: Manila-----	45	Somewhat limited Seepage Slope	0.72 0.15	Not limited		Very limited Depth to water	1.00
Yago-----	35	Somewhat limited Slope	0.15	Somewhat limited Large stones content	0.98	Very limited Depth to water	1.00
80: Mellor-----	50	Somewhat limited Seepage	0.04	Very limited Piping Salinity	1.00 0.50	Very limited Depth to water	1.00
Freedom-----	35	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
81: Neeley-----	90	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00

Table 12.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
82: Northwater-----	35	Somewhat limited Slope Seepage	0.97 0.72	Not limited		Very limited Depth to water	1.00
Povey-----	30	Very limited Seepage Slope	1.00 0.97	Somewhat limited Seepage Large stones content	0.38 0.07	Very limited Depth to water	1.00
Pavohroo-----	15	Somewhat limited Slope Seepage	0.97 0.72	Somewhat limited Piping	0.71	Very limited Depth to water	1.00
83: Parehat-----	90	Somewhat limited Seepage	0.72	Very limited Piping Depth to saturated zone	1.00 0.86	Somewhat limited Slow refill Cutbanks cave Depth to saturated zone	0.28 0.10 0.06
84: Parleys-----	80	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.15	Very limited Depth to water	1.00
85: Parleys-----	85	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.15	Very limited Depth to water	1.00
86: Parleys-----	50	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.15	Very limited Depth to water	1.00
Welby-----	35	Very limited Seepage	1.00	Very limited Piping	1.00	Very limited Depth to water	1.00
87: Parleys-----	60	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.15	Very limited Depth to water	1.00
Wheelon-----	15	Somewhat limited Seepage	0.04	Very limited Piping	1.00	Very limited Depth to water	1.00
88: Pavohroo-----	45	Somewhat limited Slope Seepage	0.97 0.72	Somewhat limited Piping	0.71	Very limited Depth to water	1.00
Povey-----	30	Very limited Seepage Slope	1.00 0.97	Somewhat limited Seepage Large stones content	0.38 0.07	Very limited Depth to water	1.00
89: Pavohroo-----	45	Somewhat limited Seepage Slope	0.72 0.28	Somewhat limited Piping	0.71	Very limited Depth to water	1.00
Stines-----	30	Very limited Seepage Slope	1.00 0.28	Somewhat limited Seepage	0.25	Very limited Depth to water	1.00

Table 12.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
89: Lonigan-----	20	Very limited Seepage Slope Depth to bedrock	 1.00 0.28 0.06	Somewhat limited Thin layer	 0.77	Very limited Depth to water	 1.00
90: Pits, gravel-----	100	Not rated		Not rated		Not rated	
91: Povey-----	35	Very limited Seepage Slope	 1.00 0.50	Somewhat limited Seepage Large stones content	 0.38 0.07	Very limited Depth to water	 1.00
Hades-----	30	Somewhat limited Seepage Slope	 0.72 0.50	Somewhat limited Piping	 0.02	Very limited Depth to water	 1.00
Hondoho-----	25	Very limited Seepage Slope	 1.00 0.50	Somewhat limited Large stones content	 0.13	Very limited Depth to water	 1.00
92: Povey-----	45	Very limited Seepage Slope	 1.00 1.00	Somewhat limited Seepage Large stones content	 0.38 0.07	Very limited Depth to water	 1.00
Ireland-----	25	Very limited Slope Depth to bedrock Seepage	 1.00 0.91 0.72	Very limited Large stones content Thin layer	 1.00 0.91	Very limited Depth to water	 1.00
Calpac-----	15	Very limited Slope Seepage	 1.00 0.72	Somewhat limited Large stones content Seepage	 0.85 0.31	Very limited Depth to water	 1.00
93: Povey-----	45	Very limited Seepage Slope	 1.00 0.97	Somewhat limited Seepage Large stones content	 0.38 0.07	Very limited Depth to water	 1.00
Pavohroo-----	30	Somewhat limited Slope Seepage	 0.97 0.72	Somewhat limited Piping	 0.71	Very limited Depth to water	 1.00
94: Povirt-----	85	Not limited		Very limited Depth to saturated zone Hard to pack Ponding	 1.00 1.00 1.00	Very limited Slow refill Cutbanks cave	 1.00 0.10
95: Raldridge-----	75	Very limited Seepage	 1.00	Somewhat limited Seepage	 0.25	Very limited Depth to water	 1.00

Table 12.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
96: Rexburg-----	85	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
97: Rexburg-----	50	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
Arbone-----	25	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
Ririe-----	15	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
98: Rexburg-----	40	Somewhat limited Seepage Slope	0.72 0.10	Very limited Piping	1.00	Very limited Depth to water	1.00
Arbone-----	35	Somewhat limited Seepage Slope	0.72 0.10	Very limited Piping	1.00	Very limited Depth to water	1.00
Ririe-----	15	Somewhat limited Seepage Slope	0.72 0.10	Very limited Piping	1.00	Very limited Depth to water	1.00
99: Rexburg-----	30	Somewhat limited Seepage Slope	0.72 0.15	Very limited Piping	1.00	Very limited Depth to water	1.00
Iphil-----	25	Somewhat limited Seepage Slope	0.72 0.15	Very limited Piping	1.00	Very limited Depth to water	1.00
Watercanyon-----	25	Somewhat limited Seepage Slope	0.72 0.15	Very limited Piping	1.00	Very limited Depth to water	1.00
100: Rexburg-----	55	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
Lanoak-----	35	Somewhat limited Seepage	0.72	Very limited Piping	0.99	Very limited Depth to water	1.00
101: Rexburg-----	55	Somewhat limited Seepage Slope	0.72 0.10	Very limited Piping	1.00	Very limited Depth to water	1.00
Lanoak-----	35	Somewhat limited Seepage Slope	0.72 0.10	Very limited Piping	0.99	Very limited Depth to water	1.00
102: Rexburg-----	35	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00

Table 12.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
102: Lanoak-----	25	Somewhat limited Seepage	0.72	Very limited Piping	0.99	Very limited Depth to water	1.00
Watercanyon-----	20	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
103: Rexburg-----	50	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
Ririe-----	20	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
Kucera-----	15	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
104: Rexburg-----	40	Somewhat limited Seepage Slope	0.72 0.15	Very limited Piping	1.00	Very limited Depth to water	1.00
Thatcher-----	25	Somewhat limited Seepage Slope	0.72 0.15	Somewhat limited Piping	0.21	Very limited Depth to water	1.00
Ririe-----	20	Somewhat limited Seepage Slope	0.72 0.15	Very limited Piping	1.00	Very limited Depth to water	1.00
105: Rexburg-----	35	Somewhat limited Seepage Slope	0.72 0.04	Very limited Piping	1.00	Very limited Depth to water	1.00
Watercanyon-----	30	Somewhat limited Seepage Slope	0.72 0.04	Very limited Piping	1.00	Very limited Depth to water	1.00
Lanoak-----	20	Somewhat limited Seepage Slope	0.72 0.04	Very limited Piping	0.99	Very limited Depth to water	1.00
106: Ridgecrest-----	45	Very limited Seepage Slope Depth to bedrock	1.00 0.97 0.69	Somewhat limited Large stones content Thin layer Seepage	0.97 0.70 0.25	Very limited Depth to water	1.00
Hondoho-----	35	Very limited Seepage Slope	1.00 0.97	Somewhat limited Large stones content	0.13	Very limited Depth to water	1.00
107: Ridgecrest-----	35	Very limited Seepage Slope Depth to bedrock	1.00 0.97 0.69	Somewhat limited Large stones content Thin layer Seepage	0.97 0.70 0.25	Very limited Depth to water	1.00

Table 12.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
107: Hondoho-----	30	Very limited Seepage Slope	1.00 0.97	Somewhat limited Large stones content	0.13	Very limited Depth to water	1.00
Hymas-----	15	Very limited Depth to bedrock Slope Seepage	1.00 0.97 0.19	Very limited Thin layer Large stones content Seepage	1.00 1.00 0.25	Very limited Depth to water	1.00
108: Ridgecrest-----	35	Very limited Seepage Slope Depth to bedrock	1.00 0.97 0.69	Somewhat limited Large stones content Thin layer Seepage	0.97 0.70 0.25	Very limited Depth to water	1.00
Hondoho-----	30	Very limited Seepage Slope	1.00 0.97	Somewhat limited Large stones content	0.13	Very limited Depth to water	1.00
Lizdale-----	20	Very limited Seepage Slope	1.00 0.97	Somewhat limited Seepage	0.62	Very limited Depth to water	1.00
109: Ridgecrest-----	45	Very limited Seepage Slope Depth to bedrock	1.00 0.97 0.69	Somewhat limited Large stones content Thin layer Seepage	0.97 0.70 0.25	Very limited Depth to water	1.00
Hymas-----	30	Very limited Depth to bedrock Slope Seepage	1.00 0.97 0.19	Very limited Thin layer Large stones content Seepage	1.00 1.00 0.25	Very limited Depth to water	1.00
110: Ririe-----	50	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
Buist-----	25	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited Depth to water	1.00
111: Ririe-----	50	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
Cedarhill-----	25	Very limited Seepage	1.00	Somewhat limited Seepage	0.25	Very limited Depth to water	1.00
112: Ririe-----	50	Somewhat limited Seepage Slope	0.72 0.04	Very limited Piping	1.00	Very limited Depth to water	1.00
Cedarhill-----	25	Very limited Seepage Slope	1.00 0.04	Somewhat limited Seepage	0.25	Very limited Depth to water	1.00

Table 12.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
113: Ririe-----	50	Somewhat limited Seepage Slope	0.72 0.04	Very limited Piping	1.00	Very limited Depth to water	1.00
Hondoho-----	25	Very limited Seepage Slope	1.00 0.04	Somewhat limited Large stones content	0.13	Very limited Depth to water	1.00
114: Ririe-----	40	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
Iphil-----	25	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
Kucera-----	20	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
115: Ririe-----	30	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
Iphil-----	25	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
Rexburg-----	25	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
116: Ririe-----	45	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
Rexburg-----	40	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
117: Ririe-----	50	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
Watercanyon-----	25	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
118: Ririe-----	45	Somewhat limited Seepage Slope	0.72 0.15	Very limited Piping	1.00	Very limited Depth to water	1.00
Watercanyon-----	35	Somewhat limited Seepage Slope	0.72 0.15	Very limited Piping	1.00	Very limited Depth to water	1.00
119: Samaria-----	90	Very limited Seepage	1.00	Somewhat limited Piping Seepage	0.78 0.03	Very limited Depth to water	1.00
120: Samaria-----	90	Very limited Seepage	1.00	Somewhat limited Piping Seepage	0.78 0.03	Very limited Depth to water	1.00

Table 12.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
121: Samaria-----	55	Very limited Seepage	1.00	Somewhat limited Piping Seepage	0.78 0.03	Very limited Depth to water	1.00
Pollynot-----	30	Very limited Seepage	1.00	Very limited Piping Seepage	0.99 0.75	Very limited Depth to water	1.00
122: Samaria-----	50	Very limited Seepage	1.00	Somewhat limited Piping Seepage	0.78 0.03	Very limited Depth to water	1.00
Sterling-----	35	Somewhat limited Seepage	0.72	Somewhat limited Seepage Large stones content	0.25 0.04	Very limited Depth to water	1.00
123: Sterling-----	80	Somewhat limited Seepage Slope	0.72 0.04	Somewhat limited Seepage Large stones content	0.25 0.04	Very limited Depth to water	1.00
124: Thatcher-----	85	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.21	Very limited Depth to water	1.00
125: Thatcher-----	45	Somewhat limited Seepage Slope	0.72 0.15	Somewhat limited Piping	0.21	Very limited Depth to water	1.00
Jensen-----	35	Somewhat limited Seepage Slope	0.72 0.15	Somewhat limited Seepage	0.06	Very limited Depth to water	1.00
126: Freedom-----	75	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
127: Tickason-----	80	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
128: Tickason-----	85	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
129: Tirod-----	85	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.29	Very limited Depth to water	1.00
130: Toefoot-----	90	Very limited Seepage	1.00	Very limited Piping	1.00	Very limited Depth to water	1.00
131: Welby-----	65	Very limited Seepage	1.00	Very limited Piping	1.00	Very limited Depth to water	1.00

Table 12.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
131: Parleys-----	20	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.15	Very limited Depth to water	1.00
132: Wursten-----	85	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Depth to water	1.00
133: Yago-----	40	Somewhat limited Slope	0.50	Somewhat limited Large stones content	0.98	Very limited Depth to water	1.00
Manila-----	35	Somewhat limited Seepage Slope	0.72 0.50	Not limited		Very limited Depth to water	1.00
134: Water-----	100	Not rated		Not rated		Not rated	

Table 13.--Engineering Index Properties

(Absence of an entry indicates that the data were not estimated)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
1:												
Araveton-----	0-8	Silt loam	CL	A-4, A-6	0	0-5	90-100	85-95	80-90	70-80	31-46	10-18
	8-36	Silt loam, loam	CL	A-6	0	0-10	85-95	80-95	75-90	75-85	31-44	12-18
	36-62	Gravelly loam	CL	A-6	0-5	10-30	65-75	60-70	55-65	50-60	30-38	12-17
Hades-----	0-20	Silt loam	CL	A-6	0	0	75-100	75-100	60-95	50-85	29-41	12-17
	20-42	Silty clay loam	CL	A-7	0	0	100	95-100	80-95	75-85	39-49	19-25
	42-60	Gravelly silty clay loam	CL, GC	A-7	0	10-20	65-75	60-75	50-60	45-55	36-45	18-25
2:												
Arbone-----	0-15	Silt loam	CL	A-4	0	0	85-100	80-90	70-90	70-85	25-35	8-12
	15-60	Gravelly silt loam, gravelly loam	GC	A-4	0	0-5	60-80	55-75	50-70	40-60	24-31	8-12
3:												
Arbone-----	0-15	Silt loam	CL	A-4	0	0	85-100	80-90	70-90	70-85	25-35	8-12
	15-60	Gravelly silt loam, gravelly loam	GC	A-4	0	0-5	60-80	55-75	50-70	40-60	24-31	8-12
4:												
Arbone-----	0-15	Silt loam	CL	A-4	0	0	85-100	80-90	70-90	70-85	25-35	8-12
	15-60	Gravelly silt loam, gravelly loam	GC	A-4	0	0-5	60-80	55-75	50-70	40-60	24-31	8-12
5:												
Arbone-----	0-15	Silt loam	CL	A-4	0	0	85-100	80-90	70-90	70-85	25-35	8-12
	15-60	Gravelly silt loam, gravelly loam	GC	A-4	0	0-5	60-80	55-75	50-70	40-60	24-31	8-12

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
5: Hondoho-----	0-14	Gravelly silt loam	CL, GC, GC- GM, SC, SC- SM	A-4, A-6	0	0-9	66-76	51-76	45-76	37-64	28-43	7-17
	14-28	Very gravelly silt loam, very cobbly loam	GC, GC-GM	A-4, A-6, A-2	0	10-45	55-75	50-70	40-60	25-45	28-43	10-17
	28-60	Very cobbly loam, very gravelly silt loam, very gravelly coarse sandy loam	SC-SM, GC-GM, GM	A-2, A-1	0	15-55	55-75	50-70	35-55	15-35	16-32	2-13
Cedarhill-----	0-7	Gravelly silt loam	CL	A-6	0-5	0-15	65-80	60-75	55-70	50-65	29-43	9-18
	7-12	Gravelly loam, gravelly silt loam	CL	A-6	0	0-15	65-80	60-75	55-70	50-65	30-38	12-17
	12-27	Gravelly loam, very gravelly loam, gravelly silt loam	GC	A-4, A-2	0	0-15	45-65	35-60	25-50	15-40	22-32	6-11
	27-60	Extremely gravelly loam, extremely cobbly loam	GC-GM, GP-GC	A-1	0-10	10-50	40-60	30-50	20-40	10-30	0-33	NP-12
6: Arbone-----	0-15	Silt loam	CL	A-4	0	0	75-85	70-85	60-70	50-60	25-35	8-12
	15-60	Gravelly silt loam, gravelly loam	GC	A-4	0	0-5	60-80	55-75	50-70	40-60	24-31	8-12

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
6: Hondoho-----	0-14	Gravelly silt loam	CL, GC, GC- GM, SC, SC- SM	A-4, A-6	0	0-9	66-76	51-76	45-76	37-64	28-43	7-17
	14-28	Very gravelly silt loam, very cobbly loam	GC, GC-GM	A-6, A-4, A-2	0	10-45	55-75	50-70	40-60	25-45	28-43	10-17
	28-60	Very cobbly loam, very gravelly silt loam, very gravelly coarse sandy loam	SC-SM, GC-GM, GM	A-1, A-2	0	15-55	55-75	50-70	35-55	15-35	16-32	2-13
Cedarhill-----	0-7	Gravelly silt loam	CL	A-6	0-5	0-15	65-80	60-75	55-70	50-65	29-43	9-18
	7-12	Gravelly loam, gravelly silt loam	CL	A-6	0	0-15	65-80	60-75	55-70	50-65	30-38	12-17
	12-27	Very gravelly loam, gravelly silt loam, gravelly loam	GC	A-4, A-2	0	0-15	45-65	35-60	25-50	15-40	22-32	6-11
	27-60	Extremely gravelly loam, extremely cobbly loam	GP-GC, GC-GM	A-1	0-10	10-50	40-60	30-50	20-40	10-30	0-33	NP-12
7: Bayhook-----	0-7	Silt loam	CL-ML	A-4	0	0	100	100	95-100	90-100	18-33	2-12
	7-13	Silt loam	CL	A-4	0	0	100	100	95-100	90-100	21-32	6-13
	13-60	Silt loam	CL-ML	A-4	0	0	100	95-100	90-100	85-100	16-29	2-11
8: Bayhook-----	0-7	Silt loam	CL-ML	A-4	0	0	100	100	95-100	90-100	18-33	2-12
	7-13	Silt loam	CL	A-4	0	0	100	100	95-100	90-100	21-32	6-13
	13-60	Silt loam	CL-ML	A-4	0	0	100	95-100	90-100	85-100	16-29	2-11

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
8:												
Ecur-----	0-15	Fine sandy loam	SC	A-2, A-4	0	0	100	90-100	80-100	30-50	21-30	6-11
	15-37	Fine sandy loam, loam	SC	A-2, A-4	0	0	90-100	80-100	75-95	30-60	21-30	6-11
	37-44	Loamy fine sand	SM	A-2, A-3	0	0	100	100	50-80	5-30	0-20	NP-2
	44-49	Loamy fine sand, gravelly loamy fine sand	SM	A-2	0	0	60-100	60-100	55-100	20-30	15-21	1-4
	49-60	Loamy fine sand	SM	A-2, A-3	0	0	100	100	50-80	5-30	0-20	NP-2
9:												
Bingham-----	0-6	Gravelly loam	CL, CL-ML, ML	A-4	0	0	75-85	70-75	60-70	55-65	25-39	6-13
	6-27	Gravelly loam	CL	A-6	0	0-10	75-85	70-75	60-70	55-65	31-43	12-17
	27-38	Very gravelly sandy loam	GC	A-1, A-2	0	0-10	45-65	40-55	30-40	20-30	22-33	6-10
	38-45	Very gravelly loamy sand	GC-GM, GM	A-1	0	0-10	25-55	20-40	15-35	10-25	17-24	2-6
	45-65	Very gravelly loamy sand, very gravelly loamy coarse sand	GC-GM, GM	A-1	0	0-10	25-55	20-40	15-35	10-25	17-24	2-6
10:												
Bingham-----	0-6	Gravelly loam	CL, CL-ML, ML	A-4	0	0	75-85	70-75	60-70	55-65	25-39	6-13
	6-27	Gravelly loam	CL	A-6	0	0-10	75-85	70-75	60-70	55-65	31-43	12-17
	27-38	Very gravelly sandy loam	GC	A-2, A-1	0	0-10	45-65	40-55	30-40	20-30	22-33	6-10
	38-45	Very gravelly loamy sand	GC-GM	A-1	0	0-10	25-55	20-40	15-35	10-25	17-24	2-6
	45-65	Very gravelly loamy sand, very gravelly loamy coarse sand	GC-GM, GM	A-1	0	0-10	25-55	20-40	15-35	10-25	17-24	2-6
Tirod-----	0-18	Silt loam	CL	A-6	0	0	95-100	90-100	85-95	80-90	33-47	12-19
	18-30	Loam	CL	A-6	0	0	90-100	85-100	80-90	75-85	33-47	12-19
	30-40	Clay loam, loam	CL	A-6, A-7	0	0	90-100	85-95	75-85	65-75	34-51	15-25
	40-62	Loam	CL	A-6	0	0	80-90	75-90	60-80	50-75	32-40	13-19

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
11: Bloor-----	0-12	Silt loam	CL	A-4	0	0	100	100	85-100	70-90	22-35	6-13
	12-20	Silty clay loam, clay loam, silt loam	CL	A-6	0	0	100	100	95-100	75-95	32-39	15-19
	20-29	Silt loam, very fine sandy loam, fine sandy loam	CL	A-4	0	0	100	100	85-100	75-90	20-27	6-10
	29-47	Very fine sandy loam, fine sandy loam	SC-SM, ML, SM	A-4	0	0	90-100	80-100	80-95	35-65	16-28	1-10
	47-60	Silt loam	CL	A-4	0	0	80-100	75-100	60-95	45-75	20-32	6-13
Brinnum-----	0-9	Silt loam	CL	A-6	0	0	100	100	90-100	80-95	30-40	12-19
	9-31	Silt loam	CL	A-6	0	0	100	100	95-100	80-95	30-40	12-19
	31-60	Silt loam, silty clay loam	CL	A-7, A-6	0	0	100	100	95-100	75-95	29-46	12-25
12: Bothwell-----	0-9	Silt loam	ML	A-4, A-6	0	0	100	95-100	90-100	90-100	34-43	10-15
	9-20	Silt loam, silty clay loam	CL	A-7, A-6	0	0	100	95-100	90-100	90-100	34-51	15-25
	20-45	Silty clay loam	CL	A-6, A-7	0	0	100	95-100	90-100	90-100	38-49	19-25
	45-60	Silt loam, silty clay loam	CL	A-6	0	0	100	90-100	85-100	75-100	30-47	12-25
13: Bothwell-----	0-9	Silt loam	ML	A-6, A-4	0	0	100	95-100	90-100	90-100	34-43	10-15
	9-20	Silt loam, silty clay loam	CL	A-7, A-6	0	0	100	95-100	90-100	90-100	34-51	15-25
	20-45	Silty clay loam	CL	A-7, A-6	0	0	100	95-100	90-100	90-100	38-49	19-25
	45-60	Silt loam, silty clay loam	CL	A-6	0	0	100	90-100	85-100	75-100	30-47	12-25
Hades-----	0-20	Silt loam	CL	A-6	0	0	75-100	75-100	60-95	50-85	29-41	12-17
	20-42	Silty clay loam	CL	A-7	0	0	100	95-100	80-95	75-85	39-49	19-25
	42-60	Gravelly silty clay loam	CL, GC	A-6, A-7	0	10-20	65-75	60-75	50-60	45-55	36-45	18-25

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
13: Justesen-----	0-8	Silt loam	CL-ML, CL	A-4	0	0	90-100	79-100	70-97	56-80	26-39	7-13
	8-16	Silt loam, silty clay loam	CL	A-6, A-7	0	0	85-100	70-100	66-100	57-92	36-50	16-24
	16-27	Silty clay loam	CL	A-7	0	0	91-100	80-100	76-100	67-91	39-49	19-25
	27-45	Silt loam	CL	A-6	0	0	91-100	80-100	73-98	62-85	33-45	13-19
	45-60	Gravelly loam	SC, CL	A-6	0	0	72-84	59-84	51-77	37-57	30-38	12-17
14: Brinnum-----	0-9	Silt loam	CL	A-6	0	0	100	100	90-100	80-95	30-40	12-19
	9-31	Silt loam	CL	A-6	0	0	100	100	95-100	80-95	30-40	12-19
	31-60	Silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	75-95	29-46	12-25
Logan-----	0-4	Slightly decomposed plant material	PT	A-8	0	0	100	100	100	90-100	---	---
	4-22	Silt loam	ML	A-7	0	0	100	100	90-100	75-95	41-55	15-18
	22-64	Silt loam	CL	A-6	0	0	100	100	95-100	85-95	31-42	12-19
Langless-----	0-3	Slightly decomposed plant material	PT	A-8	0	0	100	100	100	90-100	---	---
	3-9	Silt loam	ML, CL-ML	A-4	0	0	100	100	85-90	80-90	28-37	7-10
	9-47	Silt loam	CL	A-6	0	0	100	100	90-100	85-95	27-35	9-12
	47-63	Silt loam	CL	A-6	0	0	100	100	90-100	85-95	26-37	9-17
15: Buckboard-----	0-15	Loam	CL	A-6	0	0	100	95-100	70-90	60-80	31-42	11-16
	15-50	Loam, silt loam	CL	A-6	0	0	100	95-100	75-95	65-85	31-47	12-19
	50-65	Loam, silt loam	CL	A-6	0	0	100	90-100	65-85	55-75	29-38	12-16
16: Buist-----	0-15	Gravelly silt loam	GC, CL	A-4	0-5	0-10	70-85	65-80	60-75	45-65	24-31	8-12
	15-28	Very gravelly loam, gravelly silt loam	GC	A-4, A-2	0	0	45-70	35-60	30-55	20-50	27-39	10-15
	28-60	Extremely gravelly fine sandy loam	GM	A-1	0	10-30	15-30	10-25	5-25	5-20	17-24	2-6

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
17: Calpac-----	0-8	Gravelly silt loam	GM, SM	A-4	0	0-5	55-80	50-80	40-60	35-45	27-40	6-12
	8-15	Very gravelly silt loam	GC, GM	A-2, A-4	0	5-15	40-50	35-45	30-40	25-40	25-37	6-12
	15-23	Extremely cobblely silt loam	GC	A-2	0-15	45-60	30-50	25-45	25-35	20-35	31-43	12-17
	23-60	Extremely cobblely silt loam, extremely cobblely loam	GC	A-2	0-15	55-65	25-50	20-45	20-25	20-25	31-41	12-17
Ridgecrest-----	0-9	Very gravelly silt loam	GC, GC-GM	A-4, A-2	0	10-20	45-65	40-60	35-55	30-50	26-37	7-11
	9-13	Very cobblely loam, very cobblely silt loam	GC, GC-GM	A-4	0	30-55	65-80	60-75	50-65	40-55	26-37	7-11
	13-31	Very cobblely silt loam, very cobblely loam	SC, GC-GM, GC	A-4	0	30-55	65-80	60-75	50-65	40-55	24-34	7-11
	31-35	Extremely cobblely sandy loam	GC-GM	A-2	0	55-80	35-55	30-50	20-40	10-30	20-29	4-10
	35-45	Unweathered bedrock			---	---	---	---	---	---	---	---
Ireland-----	0-8	Very gravelly silt loam	GC, GM	A-2, A-4	0	10-25	40-65	35-60	35-55	30-45	25-36	6-10
	8-28	Extremely cobblely silt loam, extremely stony silt loam, extremely cobblely loam	GC	A-4, A-2	5-50	25-70	60-70	55-65	40-45	25-40	27-39	10-15
	28-38	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
18: Cedarhill-----	0-7	Gravelly silt loam	CL	A-6	0-5	0-15	65-80	60-75	55-70	50-65	29-43	9-18
	7-12	Gravelly loam, gravelly silt loam	CL	A-6	0	0-15	65-80	60-75	55-70	50-65	30-38	12-17
	12-27	Very gravelly loam, gravelly silt loam, gravelly loam	GC	A-4, A-2	0	0-15	45-65	35-60	25-50	15-40	22-32	6-11
	27-60	Extremely gravelly loam, extremely cobbly loam	GP-GC, GC-GM	A-1	0-10	10-50	40-60	30-50	20-40	10-30	0-33	NP-12
19: Cedarhill-----	0-7	Gravelly silt loam	CL	A-6	0-5	0-15	65-80	60-75	55-70	50-65	29-43	9-18
	7-12	Gravelly loam, gravelly silt loam	CL	A-6	0	0-15	65-80	60-75	55-70	50-65	30-38	12-17
	12-27	Gravelly loam, gravelly silt loam, very gravelly loam	GC	A-4, A-2	0	0-15	45-65	35-60	25-50	15-40	22-32	6-11
	27-60	Extremely cobbly loam, extremely gravelly loam	GC-GM, GP-GC	A-1	0-10	10-50	40-60	30-50	20-40	10-30	0-33	NP-12
20: Cedarhill-----	0-7	Gravelly silt loam	CL	A-6	0-5	0-15	65-80	60-75	55-70	50-65	29-43	9-18
	7-12	Gravelly loam, gravelly silt loam	CL	A-6	0	0-15	65-80	60-75	55-70	50-65	30-38	12-17
	12-27	Gravelly loam, very gravelly loam, gravelly silt loam	GC	A-4, A-2	0	0-15	45-65	35-60	25-50	15-40	22-32	6-11
	27-60	Extremely cobbly loam, extremely gravelly loam	GP-GC, GC-GM	A-1	0-10	10-50	40-60	30-50	20-40	10-30	0-33	NP-12

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
20: Hymas-----	0-2	Very cobbly loam	GC	A-2	5-15	25-45	40-60	35-55	25-45	15-35	25-33	6-10
	2-7	Very cobbly silt loam, very gravelly loam, very stony loam	GC, SC	A-4, A-2	5-15	30-45	50-75	45-70	35-55	25-45	22-33	6-12
	7-11	Extremely cobbly loam, very cobbly loam, very gravelly loam	GC	A-2	5-20	25-65	35-50	30-45	20-35	10-30	21-31	6-12
	11-21	Unweathered bedrock			---	---	---	---	---	---	---	---
21: Cedarhill-----	0-7	Gravelly silt loam	CL	A-6	0-5	0-15	65-80	60-75	55-70	50-65	29-43	9-18
	7-12	Gravelly loam, gravelly silt loam	CL	A-6	0	0-15	65-80	60-75	55-70	50-65	30-38	12-17
	12-27	Gravelly loam, very gravelly loam, gravelly silt loam	GC	A-4, A-2	0	0-15	45-65	35-60	25-50	15-40	22-32	6-11
	27-60	Extremely gravelly loam, extremely cobbly loam	GP-GC, GC-GM	A-1	0-10	10-50	40-60	30-50	20-40	10-30	0-33	NP-12
Lostine-----	0-7	Silt loam	CL	A-4	0	0	100	100	90-100	70-90	27-37	6-12
	7-45	Silt loam	CL	A-4	0	0	100	100	90-95	85-90	22-35	6-12
	45-60	Silt loam, silty clay loam	CL-ML, CL	A-4, A-6	0	0	85-100	80-95	70-85	55-70	20-35	5-20
22: Collinston-----	0-12	Silt loam	ML, CL	A-6	0	0	100	95-100	90-100	80-90	31-43	12-15
	12-20	Silt loam, silty clay loam	CL	A-6	0	0	100	95-100	90-100	80-90	31-47	12-21
	20-60	Silt loam, silty clay loam	CL	A-6	0	0	100	95-100	90-100	75-95	30-43	12-21

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
23:												
Collinston-----	0-12	Silt loam	CL, ML	A-6	0	0	100	95-100	90-100	80-90	31-43	12-15
	12-20	Silt loam, silty clay loam	CL	A-6	0	0	100	95-100	90-100	80-90	31-47	12-21
	20-60	Silt loam, silty clay loam	CL	A-6	0	0	100	95-100	90-100	75-95	30-43	12-21
Kearns-----	0-8	Silt loam	CL	A-6, A-4	0	0	100	100	85-95	80-90	30-42	10-16
	8-32	Silt loam	CL	A-6	0	0	100	100	85-95	80-90	31-44	12-18
	32-67	Silt loam, very fine sandy loam	CL	A-4, A-6	0	0	100	100	75-90	70-85	26-32	9-13
24:												
Copenhagen-----	0-6	Very channery loam	GC	A-2	0-5	0-15	30-55	25-50	20-50	15-35	29-38	12-16
	6-14	Very gravelly loam, very channery loam, extremely channery loam	GC	A-2	5-10	0-10	25-55	20-50	15-50	10-35	28-38	12-16
	14-24	Unweathered bedrock			---	---	---	---	---	---	---	---
Lonigan-----	0-11	Very fine sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0-5	80-95	75-95	70-90	45-60	18-33	2-12
	11-16	Very gravelly loam, very gravelly silt loam	GC-GM, GC	A-2, A-4	0	0-10	50-60	40-50	35-50	25-40	21-31	6-12
	16-33	Very gravelly silt loam, very gravelly loam	GC	A-1, A-2, A-4	0	0-40	55-70	40-50	30-45	20-40	21-34	6-15
	33-43	Weathered bedrock			---	---	---	---	---	---	---	---

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
24: Manila-----	0-5	Silt loam	CL	A-6	0	0	95-100	90-100	85-95	70-90	33-47	12-19
	5-19	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	85-95	75-90	47-57	25-29
	19-45	Clay, silty clay, silty clay loam	CL, CH	A-7	0	0	95-100	90-100	85-95	70-90	47-70	25-40
	45-60	Silt loam, loam	CL	A-4	0	0	95-100	90-100	85-95	70-90	22-30	7-12
25: Darkbull-----	0-10	Gravelly loam	SC-SM	A-4	0	0-5	65-80	60-75	50-65	35-50	20-28	3-7
	10-43	Very gravelly sandy loam	GC-GM, GM	A-1, A-2	0	0	40-60	30-50	20-40	15-35	20-31	3-10
	43-60	Very gravelly sandy loam, extremely gravelly sandy loam	GW-GC, GM, GC-GM	A-1, A-2	0	0-10	20-45	15-40	10-35	5-30	18-28	3-10
Pyrat-----	0-14	Gravelly silt loam	GC, SC	A-4	0	0	72-79	57-79	51-76	41-62	24-33	7-12
	14-25	Very gravelly sandy loam	GC	A-4, A-2	0	0	40-60	30-50	20-45	10-36	24-33	7-12
	25-33	Very gravelly sandy loam, extremely gravelly sandy loam	GW-GC, GP-GC, GC-GM	A-1, A-2	0	0	20-60	10-50	4-46	2-25	20-28	4-10
	33-43	Very gravelly sandy loam, extremely gravelly sandy loam	GC-GM, GW-GC	A-2, A-1	0	0-14	20-55	10-45	4-40	2-25	20-28	4-10
	43-65	Extremely gravelly sandy loam, extremely gravelly loamy sand	GW, GP	A-1	0	0-6	20-40	10-30	4-20	1-17	0-21	NP-4

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
25: Ecur-----	0-15	Fine sandy loam	SC	A-2, A-4	0	0	100	90-100	80-100	30-50	21-30	6-11
	15-37	Fine sandy loam, loam	SC	A-2, A-4	0	0	90-100	80-100	75-95	30-60	21-30	6-11
	37-44	Loamy fine sand	SM	A-2, A-3	0	0	100	100	50-80	5-30	0-20	NP-2
	44-49	Loamy fine sand, gravelly loamy fine sand	SM	A-2	0	0	60-100	60-100	55-100	20-30	15-21	1-4
	49-60	Loamy fine sand	SM	A-2, A-3	0	0	100	100	50-80	5-30	0-20	NP-2
26: DeJarnet-----	0-3	Gravelly silt loam	SC, CL	A-6	0	0	65-80	60-75	50-70	45-65	33-45	12-17
	3-27	Gravelly silt loam	CL	A-6	0	0	60-70	55-65	55-65	45-60	31-43	12-17
	27-41	Very gravelly loam	GC	A-2	0	5-20	45-55	35-50	20-40	15-35	30-45	12-23
	41-62	Extremely gravelly loamy fine sand	GP-GC, GC	A-2	0	10-25	20-30	15-25	10-20	5-15	23-30	6-10
27: Dumps, mine----	---	---	---	---	---	---	---	---	---	---	---	---
28: Ecur-----	0-15	Fine sandy loam	SC	A-4, A-2	0	0	100	90-100	80-100	30-50	21-30	6-11
	15-37	Fine sandy loam, loam	SC	A-4, A-2	0	0	90-100	80-100	75-95	30-60	21-30	6-11
	37-44	Loamy fine sand	SM	A-2, A-3	0	0	100	100	50-80	5-30	0-20	NP-2
	44-49	Loamy fine sand, gravelly loamy fine sand	SM	A-2	0	0	60-100	60-100	55-100	20-30	15-21	1-4
	49-60	Loamy fine sand	SM	A-3, A-2	0	0	100	100	50-80	5-30	0-20	NP-2
29: Ecur-----	0-15	Fine sandy loam	SC	A-4, A-2	0	0	100	90-100	80-100	30-50	21-30	6-11
	15-37	Fine sandy loam, loam	SC	A-4, A-2	0	0	90-100	80-100	75-95	30-60	21-30	6-11
	37-44	Loamy fine sand	SM	A-3, A-2	0	0	100	100	50-80	5-30	0-20	NP-2
	44-49	Loamy fine sand, gravelly loamy fine sand	SM	A-2	0	0	60-100	60-100	55-100	20-30	15-21	1-4
	49-60	Loamy fine sand	SM	A-2, A-3	0	0	100	100	50-80	5-30	0-20	NP-2

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
29: Darkbull-----	0-10	Gravelly loam	SC-SM	A-4	0	0-5	65-80	60-75	50-65	35-50	20-28	3-7
	10-43	Very gravelly sandy loam	GC-GM, GM	A-1, A-2	0	0	40-60	30-50	20-40	15-35	20-31	3-10
	43-60	Very gravelly sandy loam, extremely gravelly sandy loam	GW-GC, GM, GC-GM	A-2, A-1	0	0-10	20-45	15-40	10-35	5-30	18-28	3-10
30: Elevator-----	0-10	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	33-46	12-18
	10-32	Silty clay loam	CL	A-7	0	0	100	100	90-100	90-100	39-51	19-25
	32-60	Silty clay loam	CL	A-7	0	0	100	100	90-100	90-100	38-47	19-25
31: Elevator-----	0-10	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	33-46	12-18
	10-32	Silty clay loam	CL	A-7	0	0	100	100	90-100	90-100	39-51	19-25
	32-60	Silty clay loam	CL	A-7	0	0	100	100	90-100	90-100	38-47	19-25
Jensen-----	0-12	Silt loam	CL	A-6, A-4	0	0	85-100	85-100	70-90	65-85	28-41	9-15
	12-45	Gravelly silt loam, silt loam, gravelly loam	CL, GC	A-6	0	0	60-90	55-85	45-70	40-65	31-41	12-17
	45-60	Very gravelly loam, very gravelly silt loam, gravelly loam	GC-GM, GC	A-2	0	0-5	30-65	25-60	20-40	10-35	25-34	9-15
32: Elevator-----	0-10	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	33-46	12-18
	10-32	Silty clay loam	CL	A-7	0	0	100	100	90-100	90-100	39-51	19-25
	32-60	Silty clay loam	CL	A-7	0	0	100	100	90-100	90-100	38-47	19-25
Jensen-----	0-12	Silt loam	CL	A-4, A-6	0	0	85-100	85-100	70-90	65-85	28-41	9-15
	12-45	Gravelly silt loam, silt loam, gravelly loam	CL, GC	A-6	0	0	60-90	55-85	45-70	40-65	31-41	12-17
	45-60	Very gravelly loam, very gravelly silt loam, gravelly loam	GC, GC-GM	A-2	0	0-5	30-65	25-60	20-40	10-35	25-34	9-15

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
33: Fridlo-----	0-7	Silt loam	ML	A-7	0	0	100	100	80-95	75-85	37-48	13-18
	7-24	Silty clay loam	CL	A-7	0	0	100	100	90-100	85-95	41-51	19-22
	24-39	Silty clay loam	CL	A-7	0	0	100	100	90-100	85-95	39-50	19-24
	39-60	Silt loam	CL	A-6	0	0	100	100	85-95	80-90	32-40	13-18
34: Goosenawt-----	0-24	Gravelly loam	CL	A-4, A-6	0	0	70-90	65-75	60-70	50-60	27-39	9-13
	24-58	Clay loam	CL	A-6, A-7	0	0	100	95-100	90-100	70-80	39-50	19-23
	58-64	Silt loam, loam	CL	A-4, A-6	0	0	95-100	85-100	80-90	75-85	28-44	10-18
	64-74	Silt loam, loam	CL	A-6, A-4	0	0	95-100	85-100	80-90	75-85	28-44	10-18
35: Hans-----	0-10	Silt loam	CL	A-6	0	0	100	100	95-100	85-95	32-42	13-17
	10-26	Silty clay loam	CL	A-7	0	0	100	100	95-100	80-95	39-50	19-24
	26-60	Silty clay loam	CL	A-7, A-6	0	0	100	100	95-100	80-95	38-46	19-22
36: Highcreek-----	0-7	Silt loam	CL	A-4, A-6	0	0	100	100	90-100	85-95	31-45	10-17
	7-26	Silt loam, gravelly loam	CL	A-6	0	0-10	75-95	70-90	65-85	55-75	31-45	12-19
	26-66	Gravelly loam	CL, GC	A-6	0	5-10	70-90	65-75	55-75	45-65	31-45	12-19
Sterling-----	0-13	Very gravelly loam	GM, GC	A-2	0-10	15-30	40-55	35-50	25-40	10-35	25-39	6-13
	13-66	Very gravelly loam, extremely gravelly loam	GC	A-2	0-10	10-20	35-55	25-50	20-40	10-35	21-39	6-15
37: Highcreek-----	0-7	Silt loam	CL	A-4, A-6	0	0	100	100	90-100	85-95	31-45	10-17
	7-26	Silt loam, gravelly loam	CL	A-6	0	0-10	75-95	70-90	65-85	55-75	31-45	12-19
	26-66	Gravelly loam	CL, GC	A-6	0	5-10	70-90	65-75	55-75	45-65	31-45	12-19
Sterling-----	0-13	Very gravelly loam	GC, GM	A-2	0-10	15-30	40-55	35-50	25-40	10-35	25-39	6-13
	13-66	Very gravelly loam, extremely gravelly loam	GC	A-2	0-10	10-20	35-55	25-50	20-40	10-35	21-39	6-15

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10	3-10						
					inches	inches	4	10	40	200		
	In				Pct	Pct					Pct	
38:												
Hillfield-----	0-7	Silt loam	CL	A-4	0	0	100	100	95-100	80-90	22-31	6-10
	7-16	Silt loam	CL	A-4	0	0	100	100	90-100	80-90	22-33	6-12
	16-60	Silt loam, very fine sandy loam	CL	A-4	0	0	100	100	85-95	75-90	20-29	6-11
Kucera-----	0-22	Silt loam	CL	A-4	0	0	100	100	100	90-100	25-40	6-12
	22-42	Silt loam	CL	A-4	0	0	100	100	95-100	85-100	22-35	6-12
	42-60	Silt loam	CL	A-4	0	0	100	100	100	90-100	21-31	6-12
39:												
Hillfield-----	0-7	Silt loam	CL	A-4	0	0	100	100	95-100	80-90	22-31	6-10
	7-16	Silt loam	CL	A-4	0	0	100	100	90-100	80-90	22-33	6-12
	16-60	Silt loam, very fine sandy loam	CL	A-4	0	0	100	100	85-95	75-90	20-29	6-11
Kucera-----	0-22	Silt loam	CL	A-4	0	0	100	100	100	90-100	25-40	6-12
	22-42	Silt loam	CL	A-4	0	0	100	100	95-100	85-100	22-35	6-12
	42-60	Silt loam	CL	A-4	0	0	100	100	100	90-100	21-31	6-12
40:												
Hondoho-----	0-14	Gravelly silt loam	CL, GC, GC- GM, SC, SC- SM	A-4, A-6	0	0-9	66-76	51-76	45-76	37-64	28-43	7-17
	14-28	Very gravelly silt loam, very cobbly loam	GC-GM, GC	A-4, A-6, A-2	0	10-45	55-75	50-70	40-60	25-45	28-43	10-17
	28-60	Very cobbly loam, very gravelly silt loam, very gravelly coarse sandy loam	GC-GM, GM, SC-SM	A-1, A-2	0	15-55	55-75	50-70	35-55	15-35	16-32	2-13

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
40: Calpac-----	0-8	Gravelly silt loam	GM, SM	A-4	0	0-5	55-80	50-80	40-60	35-45	27-40	6-12
	8-15	Very gravelly silt loam	GM, GC	A-2, A-4	0	5-15	40-50	35-45	30-40	25-40	25-37	6-12
	15-23	Extremely cobbly silt loam	GC	A-2	0-15	45-60	30-50	25-45	25-35	20-35	31-43	12-17
	23-60	Extremely cobbly silt loam, extremely cobbly loam	GC	A-2	0-15	55-65	25-50	20-45	20-25	20-25	31-41	12-17
Lizdale-----	0-7	Very gravelly silt loam	GC	A-4, A-2	0	5-15	40-50	35-45	30-40	25-40	25-37	6-12
	7-10	Very gravelly loam, very gravelly sandy loam	GC	A-2	0	0-10	45-60	35-50	30-45	25-35	22-35	6-12
	10-36	Very gravelly sandy loam	GC	A-2, A-1	0	0-10	45-65	40-55	30-40	20-30	22-33	6-10
	36-52	Extremely gravelly sandy loam	GW	A-1	0	0-10	20-30	15-25	5-10	0-5	0-36	NP-17
	52-60	Extremely gravelly loamy sand	GC-GM, GP-GM	A-1	0	0-10	10-40	5-35	5-30	5-15	0-23	NP-6
41: Hondoho-----	0-14	Gravelly silt loam	CL, SC, SC- SM, GC, GC- GM	A-4, A-6	0	0-9	66-76	51-76	45-76	37-64	28-43	7-17
	14-28	Very gravelly silt loam, very cobbly loam	GC-GM, GC	A-4, A-6, A-2	0	10-45	55-75	50-70	40-60	25-45	28-43	10-17
	28-60	Very cobbly loam, very gravelly silt loam, very gravelly coarse sandy loam	GC-GM, GM, SC-SM	A-2, A-1	0	15-55	55-75	50-70	35-55	15-35	16-32	2-13

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
41: Hymas-----	0-2	Very cobbly loam	GC	A-2	5-15	25-45	40-60	35-55	25-45	15-35	25-33	6-10
	2-7	Very cobbly silt loam, very gravelly loam, very stony loam	SC, GC	A-2, A-4	5-15	30-45	50-75	45-70	35-55	25-45	22-33	6-12
	7-11	Extremely cobbly loam, very cobbly loam, very gravelly loam	GC	A-2	5-20	25-65	35-50	30-45	20-35	10-30	21-31	6-12
	11-21	Unweathered bedrock			---	---	---	---	---	---	---	---
Pavohroo-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	100	100	100	90-100	---	---
	1-7	Gravelly silt loam	ML, CL-ML	A-4	0	0-10	70-80	65-75	55-65	50-60	27-46	6-12
	7-16	Silt loam	CL	A-6, A-4	0	0-5	90-100	85-95	80-90	70-80	31-46	10-18
	16-39	Gravelly silt loam	CL-ML, ML	A-4	0	0-10	70-80	65-75	55-65	50-60	27-46	6-12
	39-61	Gravelly clay loam	GC	A-7, A-6	0	5-10	60-70	55-65	50-60	40-50	38-50	19-23
42: Hondoho-----	0-14	Gravelly silt loam	CL, GC-GM, SC, SC-SM, GC	A-4, A-6	0	0-9	66-76	51-76	45-76	37-64	28-43	7-17
	14-28	Very gravelly silt loam, very cobbly loam	GC-GM, GC	A-6, A-2, A-4	0	10-45	55-75	50-70	40-60	25-45	28-43	10-17
	28-60	Very cobbly loam, very gravelly silt loam, very gravelly coarse sandy loam	SC-SM, GC-GM, GM	A-1, A-2	0	15-55	55-75	50-70	35-55	15-35	16-32	2-13

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
42: Hymas-----	0-2	Very cobbly loam	GC	A-2	5-15	25-45	40-60	35-55	25-45	15-35	25-33	6-10
	2-7	Very cobbly silt loam, very gravelly loam, very stony loam	SC, GC	A-2, A-4	5-15	30-45	50-75	45-70	35-55	25-45	22-33	6-12
	7-11	Extremely cobbly loam, very cobbly loam, very gravelly loam	GC	A-2	5-20	25-65	35-50	30-45	20-35	10-30	21-31	6-12
	11-21	Unweathered bedrock			---	---	---	---	---	---	---	---
Pavohroo-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	100	100	100	90-100	---	---
	1-7	Gravelly silt loam	CL-ML, ML	A-4	0	0-10	70-80	65-75	55-65	50-60	27-46	6-12
	7-16	Silt loam	CL	A-6, A-4	0	0-5	90-100	85-95	80-90	70-80	31-46	10-18
	16-39	Gravelly silt loam	ML, CL-ML	A-4	0	0-10	70-80	65-75	55-65	50-60	27-46	6-12
	39-61	Gravelly clay loam	GC	A-6, A-7	0	5-10	60-70	55-65	50-60	40-50	38-50	19-23
43: Hondoho-----	0-14	Gravelly silt loam	CL, GC, GC-GM, SC, SC-SM	A-4, A-6	0	0-9	66-76	51-76	45-76	37-64	28-43	7-17
	14-28	Very gravelly silt loam, very cobbly loam	GC-GM, GC	A-4, A-6, A-2	0	10-45	55-75	50-70	40-60	25-45	28-43	10-17
	28-60	Very cobbly loam, very gravelly silt loam, very gravelly coarse sandy loam	GC-GM, GM, SC-SM	A-1, A-2	0	15-55	55-75	50-70	35-55	15-35	16-32	2-13

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
43: Ridgecrest-----	0-9	Very gravelly silt loam	GC-GM, GC	A-4, A-2	0	10-20	45-65	40-60	35-55	30-50	26-37	7-11
	9-13	Very cobbly silt loam	GC, GC-GM	A-4	0	30-55	65-80	60-75	50-65	40-55	26-37	7-11
	13-31	Very cobbly silt loam, very cobbly loam	SC, GC-GM, GC	A-4	0	30-55	65-80	60-75	50-65	40-55	24-34	7-11
	31-35	Extremely cobbly sandy loam	GC-GM	A-2	0	55-80	35-55	30-50	20-40	10-30	20-29	4-10
	35-45	Unweathered bedrock			---	---	---	---	---	---	---	---
Hades-----	0-20	Silt loam	CL	A-6	0	0	75-100	75-100	60-95	50-85	29-41	12-17
	20-42	Silty clay loam	CL	A-7	0	0	100	95-100	80-95	75-85	39-49	19-25
	42-60	Gravelly silty clay loam	CL, GC	A-7	0	10-20	65-75	60-75	50-60	45-55	36-45	18-25
44: Hutchley-----	0-6	Gravelly loam	SC	A-2, A-6	0-10	0-10	65-90	55-80	45-70	30-55	25-35	10-20
	6-13	Very gravelly clay loam, very cobbly clay loam, extremely cobbly clay loam	SC, GC	A-6, A-7	0-20	20-50	60-85	50-75	40-65	30-50	35-45	15-25
	13-23	Unweathered bedrock			---	---	---	---	---	---	---	---
McCarey-----	0-8	Silt loam	CL, ML	A-6	0	0-10	95-100	85-100	80-95	70-90	33-43	12-15
	8-15	Silt loam	CL	A-7, A-6	0-20	0-10	90-95	90-95	80-90	70-85	37-47	16-19
	15-19	Silt loam	CL	A-6	0-20	0-10	90-95	90-95	80-90	70-85	35-45	16-19
	19-23	Cobbly silt loam	CL	A-6	5-20	10-30	85-95	80-90	70-80	60-70	31-45	12-19
	23-33	Unweathered bedrock			---	---	---	---	---	---	---	---
Araveton-----	0-8	Silt loam	CL, ML	A-4, A-6	0	0-5	90-100	85-95	80-90	70-80	31-46	10-18
	8-36	Silt loam, loam	CL	A-6	0	0-10	85-95	80-95	75-90	75-85	31-44	12-18
	36-62	Gravelly loam	CL	A-6	0-5	10-30	65-75	60-70	55-65	50-60	30-38	12-17

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
45: Hymas-----	0-2	Very cobbly loam	GC	A-2	5-15	25-45	40-60	35-55	25-45	15-35	25-33	6-10
	2-7	Very cobbly silt loam, very gravelly loam, very stony loam	GC, SC	A-2, A-4	5-15	30-45	50-75	45-70	35-55	25-45	22-33	6-12
	7-11	Extremely cobbly loam, very cobbly loam, very gravelly loam	GC	A-2	5-20	25-65	35-50	30-45	20-35	10-30	21-31	6-12
	11-21	Unweathered bedrock			---	---	---	---	---	---	---	---
Calpac-----	0-8	Gravelly silt loam	SM, GM	A-4	0	0-5	55-80	50-80	40-60	35-45	27-40	6-12
	8-15	Very gravelly silt loam	GM, GC	A-2, A-4	0	5-15	40-50	35-45	30-40	25-40	25-37	6-12
	15-23	Extremely cobbly silt loam	GC	A-2	0-15	45-60	30-50	25-45	25-35	20-35	31-43	12-17
	23-60	Extremely cobbly silt loam, extremely cobbly loam	GC	A-2	0-15	55-65	25-50	20-45	20-25	20-25	31-41	12-17
Ireland-----	0-8	Very gravelly silt loam	GC, GM	A-2, A-4	0	10-25	40-65	35-60	35-55	30-45	25-36	6-10
	8-28	Extremely cobbly silt loam, extremely stony silt loam, extremely cobbly loam	GC	A-2, A-4	5-50	25-70	60-70	55-65	40-45	25-40	27-39	10-15
	28-38	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
46: Hymas-----	0-2	Very cobbly loam	GC	A-2	5-15	25-45	40-60	35-55	25-45	15-35	25-33	6-10
	2-7	Very cobbly silt loam, very gravelly loam, very stony loam	GC, SC	A-4, A-2	5-15	30-45	50-75	45-70	35-55	25-45	22-33	6-12
	7-11	Extremely cobbly loam, very cobbly loam, very gravelly loam	GC	A-2	5-20	25-65	35-50	30-45	20-35	10-30	21-31	6-12
	11-21	Unweathered bedrock			---	---	---	---	---	---	---	---
Northwater-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	100	100	100	90-100	---	---
	2-20	Gravelly silt loam	SC, ML, SM	A-2, A-4, A-6	0	0	70-85	60-75	40-65	30-55	29-41	9-15
	20-31	Gravelly silt loam, very gravelly silt loam, very gravelly loam	GC	A-2, A-4	0	0-20	45-65	35-55	25-50	20-45	27-39	9-15
	31-37	Very gravelly loam, very gravelly clay loam	GC	A-2	0	15-20	45-60	35-50	25-45	20-40	30-45	12-23
	37-62	Very gravelly loam, very gravelly clay loam	GC	A-2	0	10-30	50-65	40-55	25-45	20-40	30-45	12-23
Clayburn-----	0-4	Silt loam	CL	A-4	0	0	84-94	68-94	60-92	48-75	25-39	6-13
	4-21	Loam	SC, CL	A-4	0-1	0-5	84-94	67-94	56-87	39-64	22-37	6-13
	21-39	Cobbly clay loam	CL	A-7, A-6	0-1	14-22	83-94	66-94	59-89	46-71	39-48	19-23
	39-60	Cobbly clay loam	CL	A-7, A-6	0-4	17-32	81-92	66-92	58-87	46-69	39-48	19-23

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
47: Hymas-----	0-2	Very cobbly loam	GC	A-2	5-15	25-45	40-60	35-55	25-45	15-35	25-33	6-10
	2-7	Very cobbly silt loam, very gravelly loam, very stony loam	SC, GC	A-2, A-4	5-15	30-45	50-75	45-70	35-55	25-45	22-33	6-12
	7-11	Extremely cobbly loam, very cobbly loam, very gravelly loam	GC	A-2	5-20	25-65	35-50	30-45	20-35	10-30	21-31	6-12
	11-21	Unweathered bedrock			---	---	---	---	---	---	---	---
Povey-----	0-5	Gravelly loam	SM, GM	A-4	0	0-13	65-80	55-70	45-60	35-50	27-50	4-11
	5-12	Very gravelly loam, very gravelly sandy loam, very cobbly loam	GM	A-2	0-5	10-35	40-60	35-55	25-45	15-35	25-43	6-13
	12-20	Very cobbly loam	GC, SC	A-2, A-4, A-6	0	30-40	45-65	35-55	25-45	20-40	28-43	10-17
	20-35	Very gravelly sandy loam, extremely gravelly sandy loam, extremely gravelly loam	GC	A-1, A-2	0-15	10-30	40-55	35-50	25-45	10-30	20-33	4-12
	35-60	Extremely gravelly sandy loam	GC, GC-GM	A-2	0	10-35	25-45	20-40	15-35	10-25	15-25	4-15

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
48: Hymas-----	0-2	Very cobbly loam	GC	A-2	5-15	25-45	40-60	35-55	25-45	15-35	25-33	6-10
	2-7	Very cobbly silt loam, very gravelly loam, very stony loam	SC, GC	A-4, A-2	5-15	30-45	50-75	45-70	35-55	25-45	22-33	6-12
	7-11	Extremely cobbly loam, very cobbly loam, very gravelly loam	GC	A-2	5-20	25-65	35-50	30-45	20-35	10-30	21-31	6-12
	11-21	Unweathered bedrock			---	---	---	---	---	---	---	---
Povey-----	0-5	Gravelly loam	SM, GM	A-4	0	0-13	65-80	55-70	45-60	35-50	27-50	4-11
	5-12	Very gravelly loam, very gravelly sandy loam, very cobbly loam	GM	A-2	0-5	10-35	40-60	35-55	25-45	15-35	25-43	6-13
	12-20	Very cobbly loam	GC, SC	A-6, A-2, A-4	0	30-40	45-65	35-55	25-45	20-40	28-43	10-17
	20-35	Very gravelly sandy loam, extremely gravelly sandy loam, extremely gravelly loam	GC	A-2, A-1	0-15	10-30	40-55	35-50	25-45	10-30	20-33	4-12
	35-60	Extremely gravelly sandy loam	GC, GC-GM	A-2	0	10-35	25-45	20-40	15-35	10-25	15-25	4-15
Pavohroo-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	100	100	100	90-100	---	---
	1-7	Gravelly silt loam	ML, CL-ML	A-4	0	0-10	70-80	65-75	55-65	50-60	27-46	6-12
	7-16	Silt loam	CL	A-4, A-6	0	0-5	90-100	85-95	80-90	70-80	31-46	10-18
	16-39	Gravelly silt loam	CL-ML, ML	A-4	0	0-10	70-80	65-75	55-65	50-60	27-46	6-12
	39-61	Gravelly clay loam	GC	A-7, A-6	0	5-10	60-70	55-65	50-60	40-50	38-50	19-23

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
49:												
Inkom-----	0-6	Silt loam	ML	A-4	0	0	100	95-100	95-100	80-90	28-43	7-13
	6-32	Silt loam	CL	A-6	0	0	100	95-100	95-100	80-90	33-47	12-19
	32-60	Silt loam	CL	A-6	0	0	100	95-100	95-100	80-90	33-47	12-19
50:												
Iphil-----	0-10	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	20-35	3-12
	10-36	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	22-33	6-12
	36-60	Loam, silt loam	CL	A-4	0	0	95-100	95-100	90-100	70-90	23-31	7-12
Ririe-----	0-14	Silt loam	CL	A-4, A-6	0	0	95-100	95-100	95-100	75-90	29-37	9-12
	14-63	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	23-31	7-12
Watercanyon----	0-5	Silt loam	CL	A-4	0	0	100	100	95-100	90-100	22-33	6-12
	5-33	Silt loam, very fine sandy loam, silt	CL-ML, ML	A-4	0	0	100	100	95-100	75-100	17-29	2-10
	33-62	Silt loam, very fine sandy loam	ML, CL-ML	A-4	0	0	100	100	95-100	75-100	17-29	2-10
51:												
Ireland-----	0-8	Very gravelly silt loam	GC, GM	A-2, A-4	0	10-25	40-65	35-60	35-55	30-45	25-36	6-10
	8-28	Extremely cobbly silt loam, extremely stony silt loam, extremely cobbly loam	GC	A-2, A-4	5-50	25-70	60-70	55-65	40-45	25-40	27-39	10-15
	28-38	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
51: Calpac-----	0-8	Gravelly silt loam	GM, SM	A-4	0	0-5	55-80	50-80	40-60	35-45	27-40	6-12
	8-15	Very gravelly silt loam	GC, GM	A-4, A-2	0	5-15	40-50	35-45	30-40	25-40	25-37	6-12
	15-23	Extremely cobblely silt loam	GC	A-2	0-15	45-60	30-50	25-45	25-35	20-35	31-43	12-17
	23-60	Extremely cobblely silt loam, extremely cobblely loam	GC	A-2	0-15	55-65	25-50	20-45	20-25	20-25	31-41	12-17
52: Jensen-----	0-12	Silt loam	CL	A-6, A-4	0	0	85-100	85-100	70-90	65-85	28-41	9-15
	12-45	Gravelly silt loam, silt loam, gravelly loam	GC, CL	A-6	0	0	60-90	55-85	45-70	40-65	31-41	12-17
	45-60	Very gravelly loam, very gravelly silt loam, gravelly loam	GC-GM, GC	A-2	0	0-5	30-65	25-60	20-40	10-35	25-34	9-15
53: Jensen-----	0-12	Silt loam	CL	A-6, A-4	0	0	85-100	85-100	70-90	65-85	28-41	9-15
	12-45	Gravelly silt loam, silt loam, gravelly loam	GC, CL	A-6	0	0	60-90	55-85	45-70	40-65	31-41	12-17
	45-60	Very gravelly loam, very gravelly silt loam, gravelly loam	GC, GC-GM	A-2	0	0-5	30-65	25-60	20-40	10-35	25-34	9-15

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
54: Jensen-----	0-12	Silt loam	CL	A-4, A-6	0	0	85-100	85-100	70-90	65-85	28-41	9-15
	12-45	Gravelly silt loam, silt loam, gravelly loam	GC, CL	A-6	0	0	60-90	55-85	45-70	40-65	31-41	12-17
	45-60	Very gravelly loam, very gravelly silt loam, gravelly loam	GC-GM, GC	A-2	0	0-5	30-65	25-60	20-40	10-35	25-34	9-15
Iphil-----	0-10	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	20-35	3-12
	10-36	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	22-33	6-12
	36-60	Loam, silt loam	CL	A-4	0	0	95-100	95-100	90-100	70-90	23-31	7-12
Wursten-----	0-14	Gravelly silt loam	CL	A-4	0	0-10	65-80	60-75	55-75	50-65	25-33	8-12
	14-60	Gravelly loam, gravelly silt loam	CL	A-4	0	5-10	60-80	55-75	55-75	45-60	23-31	8-12
55: Jovine-----	0-7	Silt loam	ML	A-4	0	0	100	95-100	90-100	80-90	29-40	9-12
	7-60	Silt loam	CL	A-6, A-4	0	0	100	95-100	85-95	75-90	27-37	9-12
56: Justesen-----	0-8	Silt loam	CL-ML, CL	A-4	0	0	90-100	79-100	70-97	56-80	26-39	7-13
	8-16	Silt loam, silty clay loam	CL	A-6, A-7	0	0	85-100	70-100	66-100	57-92	36-50	16-24
	16-27	Silty clay loam	CL	A-7	0	0	91-100	80-100	76-100	67-91	39-49	19-25
	27-45	Silt loam	CL	A-6	0	0	91-100	80-100	73-98	62-85	33-45	13-19
	45-60	Gravelly loam	CL, SC	A-6	0	0	72-84	59-84	51-77	37-57	30-38	12-17
57: Justesen-----	0-8	Silt loam	CL-ML, CL	A-4	0	0	90-100	79-100	70-97	56-80	26-39	7-13
	8-16	Silt loam, silty clay loam	CL	A-7, A-6	0	0	85-100	70-100	66-100	57-92	36-50	16-24
	16-27	Silty clay loam	CL	A-7	0	0	91-100	80-100	76-100	67-91	39-49	19-25
	27-45	Silt loam	CL	A-6	0	0	91-100	80-100	73-98	62-85	33-45	13-19
	45-60	Gravelly loam	CL, SC	A-6	0	0	72-84	59-84	51-77	37-57	30-38	12-17

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
58:												
Justesen-----	0-8	Silt loam	CL, CL-ML	A-4	0	0	90-100	79-100	70-97	56-80	26-39	7-13
	8-16	Silt loam, silty clay loam	CL	A-6, A-7	0	0	85-100	70-100	66-100	57-92	36-50	16-24
	16-27	Silty clay loam	CL	A-7	0	0	91-100	80-100	76-100	67-91	39-49	19-25
	27-45	Silt loam	CL	A-6	0	0	91-100	80-100	73-98	62-85	33-45	13-19
	45-60	Gravelly loam	CL, SC	A-6	0	0	72-84	59-84	51-77	37-57	30-38	12-17
Ririe-----	0-14	Silt loam	CL	A-4, A-6	0	0	95-100	95-100	95-100	75-90	29-37	9-12
	14-63	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	23-31	7-12
Buist-----	0-15	Gravelly silt loam	CL, GC	A-4	0-5	0-10	70-85	65-80	60-75	45-65	24-31	8-12
	15-28	Very gravelly loam, gravelly silt loam	GC	A-4, A-2	0	0	45-70	35-60	30-55	20-50	27-39	10-15
	28-60	Extremely gravelly fine sandy loam	GM	A-1	0	10-30	15-30	10-25	5-25	5-20	17-24	2-6
59:												
Kearns-----	0-8	Silt loam	CL	A-4, A-6	0	0	100	100	85-95	80-90	30-42	10-16
	8-32	Silt loam	CL	A-6	0	0	100	100	85-95	80-90	31-44	12-18
	32-67	Silt loam, very fine sandy loam	CL	A-4, A-6	0	0	100	100	75-90	70-85	26-32	9-13
60:												
Kearns-----	0-8	Silt loam	CL	A-6, A-4	0	0	100	100	85-95	80-90	30-42	10-16
	8-32	Silt loam	CL	A-6	0	0	100	100	85-95	80-90	31-44	12-18
	32-67	Silt loam, very fine sandy loam	CL	A-6, A-4	0	0	100	100	75-90	70-85	26-32	9-13
61:												
Kidman-----	0-17	Fine sandy loam	SC	A-4	0	0	100	100	70-85	40-55	21-35	4-12
	17-38	Fine sandy loam	SC	A-4	0	0	100	100	70-85	40-55	21-35	4-12
	38-66	Loam	SC	A-4	0	0	100	100	70-85	40-55	20-31	4-12
62:												
Kidman-----	0-17	Fine sandy loam	SC	A-4	0	0	100	100	70-85	40-55	21-35	4-12
	17-38	Fine sandy loam	SC	A-4	0	0	100	100	70-85	40-55	21-35	4-12
	38-66	Loam	SC	A-4	0	0	100	100	70-85	40-55	20-31	4-12

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
62: Preston-----	0-3	Fine sand	SM	A-3, A-2	0	0	100	100	50-80	5-30	0-22	NP-2
	3-65	Fine sand, loamy fine sand, sand	SM	A-2, A-3	0	0	100	100	50-80	5-30	0-20	NP-2
63: Kucera-----	0-22	Silt loam	CL	A-4	0	0	100	100	100	90-100	25-40	6-12
	22-42	Silt loam	CL	A-4	0	0	100	100	95-100	85-100	22-35	6-12
	42-60	Silt loam	CL	A-4	0	0	100	100	100	90-100	21-31	6-12
64: Lagonot-----	0-10	Silt loam	ML	A-6	0	0	100	100	90-100	80-90	31-44	10-17
	10-60	Silt loam	CL	A-6	0	0	100	100	85-95	75-85	30-40	12-17
65: Langless-----	0-3	Slightly decomposed plant material	PT	A-8	0	0	100	100	100	90-100	---	---
	3-9	Silt loam	ML, CL-ML	A-4	0	0	100	100	85-90	80-90	28-37	7-10
	9-47	Silt loam	CL	A-6	0	0	100	100	90-100	85-95	27-35	9-12
	47-63	Silt loam	CL	A-6	0	0	100	100	90-100	85-95	26-37	9-17
66: Langless-----	0-3	Slightly decomposed plant material	PT	A-8	0	0	100	100	100	90-100	---	---
	3-9	Silt loam	CL-ML, ML	A-4	0	0	100	100	85-90	80-90	28-37	7-10
	9-47	Silt loam	CL	A-6	0	0	100	100	90-100	85-95	27-35	9-12
	47-63	Silt loam	CL	A-6	0	0	100	100	90-100	85-95	26-37	9-17
Logan-----	0-4	Slightly decomposed plant material	PT	A-8	0	0	100	100	100	90-100	---	---
	4-22	Silt loam	ML	A-7	0	0	100	100	90-100	75-95	41-55	15-18
	22-64	Silt loam	CL	A-6	0	0	100	100	95-100	85-95	31-42	12-19
67: Lanoak-----	0-30	Silt loam	ML	A-4	0	0	100	100	95-100	90-100	27-41	6-13
	30-49	Silt loam	ML	A-4	0	0	100	100	95-100	90-100	27-41	6-13
	49-60	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	31-45	12-19
68: Lanoak-----	0-30	Silt loam	ML	A-4	0	0	100	100	95-100	90-100	27-41	6-13
	30-49	Silt loam	ML	A-4	0	0	100	100	95-100	90-100	27-41	6-13
	49-60	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	31-45	12-19

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
69:												
Lanoak-----	0-30	Silt loam	ML	A-4	0	0	100	100	95-100	90-100	27-41	6-13
	30-49	Silt loam	ML	A-4	0	0	100	100	95-100	90-100	27-41	6-13
	49-60	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	31-45	12-19
Hondoho-----	0-14	Gravelly silt loam	GC-GM, SC, SC-SM, GC, CL	A-4, A-6	0	0-9	66-76	51-76	45-76	37-64	28-43	7-17
	14-28	Very gravelly silt loam, very cobbly loam	GC-GM, GC	A-4, A-6, A-2	0	10-45	55-75	50-70	40-60	25-45	28-43	10-17
	28-60	Very gravelly silt loam, very gravelly loam, very cobbly loam	GC-GM, SC-SM, GM	A-2, A-1	0	15-55	55-75	50-70	35-55	15-35	16-32	2-13
70:												
Logan-----	0-4	Slightly decomposed plant material	PT	A-8	0	0	100	100	100	90-100	---	---
	4-22	Silt loam	ML	A-7	0	0	100	100	90-100	75-95	41-55	15-18
	22-64	Silt loam	CL	A-6	0	0	100	100	95-100	85-95	31-42	12-19
71:												
Lonigan-----	0-11	Very fine sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0-5	80-95	75-95	70-90	45-60	18-33	2-12
	11-16	Very gravelly loam, very gravelly silt loam	GC, GC-GM	A-2, A-4	0	0-10	50-60	40-50	35-50	25-40	21-31	6-12
	16-33	Very gravelly silt loam, very gravelly loam	GC	A-2, A-4, A-1	0	0-40	55-70	40-50	30-45	20-40	21-34	6-15
	33-43	Weathered bedrock			---	---	---	---	---	---	---	---

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
71: Lizdale-----	0-7	Very gravelly silt loam	GC	A-2, A-4	0	5-15	40-50	35-45	30-40	25-40	25-37	6-12
	7-10	Very gravelly loam, very gravelly sandy loam	GC	A-2	0	0-10	45-60	35-50	30-45	25-35	22-35	6-12
	10-36	Very gravelly sandy loam	GC	A-2, A-1	0	0-10	45-65	40-55	30-40	20-30	22-33	6-10
	36-52	Extremely gravelly sandy loam	GW	A-1	0	0-10	20-30	15-25	5-10	0-5	0-36	NP-17
	52-60	Extremely gravelly loamy sand	GC-GM, GP-GM	A-1	0	0-10	10-40	5-35	5-30	5-15	0-23	NP-6
72: Lostine-----	0-7	Silt loam	CL	A-4	0	0	100	100	90-100	70-90	27-37	6-12
	7-45	Silt loam	CL	A-4	0	0	100	100	90-95	85-90	22-35	6-12
	45-60	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6	0	0	85-100	80-95	70-85	55-70	20-35	5-20
73: Manila-----	0-5	Silt loam	CL	A-6	0	0	95-100	90-100	85-95	70-90	33-47	12-19
	5-19	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	85-95	75-90	47-57	25-29
	19-45	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	85-95	70-90	47-70	25-40
	45-60	Silt loam, loam	CL	A-4	0	0	95-100	90-100	85-95	70-90	22-30	7-12
74: Manila-----	0-5	Silt loam	CL	A-6	0	0	95-100	90-100	85-95	70-90	33-47	12-19
	5-19	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	85-95	75-90	47-57	25-29
	19-45	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	85-95	70-90	47-70	25-40
	45-60	Silt loam, loam	CL	A-4	0	0	95-100	90-100	85-95	70-90	22-30	7-12

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
74: Broadhead-----	0-9	Silt loam	CL	A-6	0	0-5	95-100	90-100	85-95	80-90	33-46	12-18
	9-15	Silty clay loam, silty clay	CH, CL	A-7	0	0-5	95-100	90-100	80-90	75-90	47-66	25-36
	15-36	Silty clay	CH	A-7	0	0	90-100	85-100	80-100	80-100	50-70	29-44
	36-41	Gravelly silty clay, silty clay	CH, CL	A-7	0	0-15	80-100	70-100	55-95	50-85	45-66	23-36
	41-60	Gravelly clay loam, clay loam	CH, CL	A-7	0	0-15	75-100	70-100	55-95	50-85	45-66	23-36
75: Manila-----	0-5	Silt loam	CL	A-6	0	0	95-100	90-100	85-95	70-90	33-47	12-19
	5-19	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	85-95	75-90	47-57	25-29
	19-45	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	85-95	70-90	47-70	25-40
	45-60	Silt loam, loam	CL	A-4	0	0	95-100	90-100	85-95	70-90	22-30	7-12
Broadhead-----	0-9	Silt loam	CL	A-6	0	0-5	95-100	90-100	85-95	80-90	33-46	12-18
	9-15	Silty clay loam, silty clay	CH, CL	A-7	0	0-5	95-100	90-100	80-90	75-90	47-66	25-36
	15-36	Silty clay	CH	A-7	0	0	90-100	85-100	80-100	80-100	50-70	29-44
	36-41	Gravelly silty clay, silty clay	CL, CH	A-7	0	0-15	75-100	70-100	55-95	50-85	45-66	23-36
	41-60	Gravelly clay loam, clay loam	CL, CH	A-7	0	0-15	75-100	70-100	55-95	50-85	45-66	23-36
76: Manila-----	0-5	Silt loam	CL	A-6	0	0	95-100	90-100	85-95	70-90	33-47	12-19
	5-19	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	85-95	75-90	47-57	25-29
	19-45	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	85-95	70-90	47-70	25-40
	45-60	Silt loam, loam	CL	A-4	0	0	95-100	90-100	85-95	70-90	22-30	7-12

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
76: Lonigan-----	0-11	Very fine sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0-5	80-95	75-95	70-90	45-60	18-33	2-12
	11-16	Very gravelly loam, very gravelly silt loam	GC, GC-GM	A-2, A-4	0	0-10	50-60	40-50	35-50	25-40	21-31	6-12
	16-33	Very gravelly silt loam, very gravelly loam	GC	A-4, A-2, A-1	0	0-40	55-70	40-50	30-45	20-40	21-34	6-15
	33-43	Weathered bedrock			---	---	---	---	---	---	---	---
77: Manila-----	0-5	Silt loam	CL	A-6	0	0	95-100	90-100	85-95	70-90	33-47	12-19
	5-19	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	85-95	75-90	47-57	25-29
	19-45	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	85-95	70-90	47-70	25-40
	45-60	Silt loam, loam	CL	A-4	0	0	95-100	90-100	85-95	70-90	22-30	7-12
Obnot-----	0-5	Cobbly silty clay loam	CL	A-7	10-25	25-30	95-100	90-100	90-100	83-91	41-53	19-25
	5-31	Silty clay, clay loam	CH	A-7	0	0-10	94-100	89-100	79-100	75-100	47-70	25-40
	31-34	Clay loam	CL	A-7	0	0	90-100	75-100	63-98	49-78	34-51	15-25
	34-60	Cobbly clay loam, clay loam	CH, CL	A-7	5-20	10-25	95-100	90-100	90-95	72-77	46-53	25-29
78: Manila-----	0-5	Silt loam	CL	A-6	0	0	95-100	90-100	85-95	70-90	33-47	12-19
	5-19	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	85-95	75-90	47-57	25-29
	19-45	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	85-95	70-90	47-70	25-40
	45-60	Silt loam, loam	CL	A-4	0	0	95-100	90-100	85-95	70-90	22-30	7-12

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
78: Yago-----	0-10	Very stony silty clay loam	CL	A-7	15-25	15-25	65-90	60-85	55-80	45-70	41-51	19-22
	10-40	Very cobbly clay loam, very cobbly silty clay loam	CH, CL, GC, SC	A-7	0-5	40-55	60-80	55-75	50-70	40-60	45-57	23-29
	40-60	Very cobbly silty clay loam, very cobbly silt loam	CL	A-6, A-7	0	35-50	75-95	70-90	65-85	55-80	35-50	16-24
79: Manila-----	0-5	Silt loam	CL	A-6	0	0	95-100	90-100	85-95	70-90	33-47	12-19
	5-19	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	85-95	75-90	47-57	25-29
	19-45	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	85-95	70-90	47-70	25-40
	45-60	Silt loam, loam	CL	A-4	0	0	95-100	90-100	85-95	70-90	22-30	7-12
Yago-----	0-10	Very stony silty clay loam	CL	A-7	15-25	15-25	65-90	60-85	55-80	45-70	41-51	19-22
	10-40	Very cobbly clay loam, very cobbly silty clay loam	CL, SC, CH, GC	A-7	0-5	40-55	60-80	55-75	50-70	40-60	45-57	23-29
	40-60	Very cobbly silty clay loam, very cobbly silt loam	CL	A-7, A-6	0	35-50	75-95	70-90	65-85	55-80	35-50	16-24
80: Mellor-----	0-4	Silt loam	CL	A-6, A-4	0	0	100	100	85-95	75-85	28-42	10-17
	4-16	Silty clay loam	CL	A-7, A-6	0	0	100	100	90-100	85-95	39-49	19-25
	16-60	Silt loam	CL	A-6	0	0	100	95-100	80-90	75-85	30-40	12-19

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
80: Freedom-----	0-13	Silt loam	CL	A-6	0	0	100	100	90-100	85-95	31-45	12-19
	13-34	Silt loam	CL	A-6	0	0	100	100	95-100	90-95	31-45	12-19
	34-60	Silt loam, silty clay loam	CL	A-6	0	0	100	100	95-100	90-95	27-47	10-25
81: Neeley-----	0-7	Silt loam	ML, CL-ML	A-4	0	0	100	100	95-100	75-100	18-32	2-9
	7-14	Silt loam	ML, CL-ML	A-4	0	0	100	100	95-100	75-100	19-33	3-12
	14-65	Silt loam	ML, CL-ML	A-4	0	0	100	100	95-100	75-100	18-28	3-9
82: Northwater-----	0-2	Slightly decomposed plant material	PT	A-8	0	0	100	100	100	90-100	---	---
	2-20	Gravelly silt loam	SC, ML, SM	A-6, A-2, A-4	0	0	70-85	60-75	40-65	30-55	29-41	9-15
	20-31	Gravelly silt loam, very gravelly silt loam, very gravelly loam	GC	A-2, A-4	0	0-20	45-65	35-55	25-50	20-45	27-39	9-15
	31-37	Very gravelly loam, very gravelly clay loam	GC	A-2	0	15-20	45-60	35-50	25-45	20-40	30-45	12-23
	37-62	Very gravelly loam, very gravelly clay loam	GC	A-2	0	10-30	50-65	40-55	25-45	20-40	30-45	12-23

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
82: Povey-----	0-5	Gravelly loam	GM, SM	A-4	0	0-13	65-80	55-70	45-60	35-50	27-50	4-11
	5-12	Very gravelly loam, very gravelly sandy loam, very cobbly loam	GM	A-2	0-5	10-35	40-60	35-55	25-45	15-35	25-43	6-13
	12-20	Very cobbly loam	GC, SC	A-6, A-4, A-2	0	30-40	45-65	35-55	25-45	20-40	28-43	10-17
	20-35	Very gravelly sandy loam, extremely gravelly sandy loam, extremely gravelly loam	GC	A-1, A-2	0-15	10-30	40-55	35-50	25-45	10-30	20-33	4-12
	35-60	Extremely gravelly sandy loam	GC-GM, GC	A-2	0	10-35	25-45	20-40	15-35	10-25	15-25	4-15
Pavohroo-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	100	100	100	90-100	---	---
	1-7	Gravelly silt loam	CL-ML, ML	A-4	0	0-10	70-80	65-75	55-65	50-60	27-46	6-12
	7-16	Silt loam	CL	A-6, A-4	0	0-5	90-100	85-95	80-90	70-80	31-46	10-18
	16-39	Gravelly silt loam	ML, CL-ML	A-4	0	0-10	70-80	65-75	55-65	50-60	27-46	6-12
	39-61	Gravelly clay loam	GC	A-6, A-7	0	5-10	60-70	55-65	50-60	40-50	38-50	19-23
83: Parehat-----	0-6	Silt loam	CL	A-4	0	0	100	100	80-90	70-80	22-37	6-13
	6-52	Silt loam	CL	A-6	0	0	90-100	85-100	80-95	75-85	31-38	13-15
	52-64	Silt loam, loam	CL	A-6	0	0	90-100	85-100	80-95	75-85	31-40	13-19
84: Parleys-----	0-5	Silt loam	CL	A-6	0	0	100	100	95-100	80-90	31-45	11-18
	5-26	Silty clay loam	CL	A-7	0	0	100	100	100	90-100	39-51	19-25
	26-64	Silt loam, loam	CL	A-6	0	0	100	100	95-100	70-95	27-38	12-19
85: Parleys-----	0-5	Silt loam	CL	A-6	0	0	100	100	95-100	80-90	31-45	11-18
	5-26	Silty clay loam	CL	A-7	0	0	100	100	100	90-100	39-51	19-25
	26-64	Silt loam, loam	CL	A-6	0	0	100	100	95-100	70-95	27-38	12-19

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
86:												
Parleys-----	0-5	Silt loam	CL	A-6	0	0	100	100	95-100	80-90	31-45	11-18
	5-26	Silty clay loam	CL	A-7	0	0	100	100	100	90-100	39-51	19-25
	26-64	Silt loam, loam	CL	A-6	0	0	100	100	95-100	70-95	27-38	12-19
Welby-----	0-11	Silt loam	CL	A-4	0	0	100	100	95-100	75-90	25-35	6-12
	11-36	Silt loam, loam	CL	A-4	0	0	100	100	95-100	75-90	21-35	6-12
	36-60	Fine sandy loam	CL-ML	A-4	0	0	100	100	80-95	60-70	17-31	2-12
87:												
Parleys-----	0-5	Silt loam	CL	A-6	0	0	100	100	95-100	80-90	31-45	11-18
	5-26	Silty clay loam	CL	A-7	0	0	100	100	100	90-100	39-51	19-25
	26-64	Silt loam, loam	CL	A-6	0	0	100	100	95-100	70-95	27-38	12-19
Wheelon-----	0-8	Silt loam	CL	A-6	0	0	100	95-100	85-100	80-90	31-45	12-19
	8-14	Silt loam, silty clay loam	CL	A-6	0	0	100	95-100	95-100	90-95	35-46	16-24
	14-20	Silt loam, silty clay loam	CL	A-6	0	0	100	95-100	95-100	85-95	29-42	12-21
	20-45	Silty clay loam	CL	A-7	0	0	100	95-100	80-95	75-85	39-49	19-25
	45-60	Silt loam, silty clay loam	CL	A-6	0	0	100	95-100	95-100	85-95	29-42	12-21
88:												
Pavohroo-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	100	100	100	90-100	---	---
	1-7	Gravelly silt loam	CL-ML, ML	A-4	0	0-10	70-80	65-75	55-65	50-60	27-46	6-12
	7-16	Silt loam	CL	A-4, A-6	0	0-5	90-100	85-95	80-90	70-80	31-46	10-18
	16-39	Gravelly silt loam	CL-ML, ML	A-4	0	0-10	70-80	65-75	55-65	50-60	27-46	6-12
	39-61	Gravelly clay loam	GC	A-6, A-7	0	5-10	60-70	55-65	50-60	40-50	38-50	19-23

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
88: Povey-----	0-5	Gravelly loam	SM, GM	A-4	0	0-13	65-80	55-70	45-60	35-50	27-50	4-11
	5-12	Very gravelly loam, very gravelly sandy loam, very cobbly loam	GM	A-2	0-5	10-35	40-60	35-55	25-45	15-35	25-43	6-13
	12-20	Very cobbly loam	GC, SC	A-2, A-4, A-6	0	30-40	45-65	35-55	25-45	20-40	28-43	10-17
	20-35	Very gravelly sandy loam, extremely gravelly sandy loam, extremely gravelly loam	GC	A-1, A-2	0-15	10-30	40-55	35-50	25-45	10-30	20-33	4-12
	35-60	Extremely gravelly sandy loam	GC-GM, GC	A-2	0	10-35	25-45	20-40	15-35	10-25	15-25	4-15
89: Pavohroo-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	100	100	100	90-100	---	---
	1-7	Gravelly silt loam	CL-ML, ML	A-4	0	0-10	70-80	65-75	55-65	50-60	27-46	6-12
	7-16	Silt loam	CL	A-6, A-4	0	0-5	90-100	85-95	80-90	70-80	31-46	10-18
	16-39	Gravelly silt loam	CL-ML, ML	A-4	0	0-10	70-80	65-75	55-65	50-60	27-46	6-12
	39-61	Gravelly clay loam	GC	A-6, A-7	0	5-10	60-70	55-65	50-60	40-50	38-50	19-23
Stines-----	0-13	Gravelly loam	CL-ML	A-4	0	0-10	60-75	55-70	50-65	45-60	20-33	3-10
	13-24	Very gravelly loam, very gravelly sandy loam, very cobbly loam	GC-GM	A-2	0	10-35	35-50	30-45	25-40	20-35	20-31	3-10
	24-44	Very gravelly sandy loam	GC-GM	A-2	0-10	10-30	30-45	25-40	20-35	15-30	19-28	3-10
	44-60	Extremely cobbly loamy sand	GP-GC, GW	A-1	5-20	30-60	25-40	20-35	10-20	0-15	16-27	2-10

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
89: Lonigan-----	0-11	Very fine sandy loam	SC-SM, SM, CL-ML, ML	A-4	0	0-5	80-95	75-95	70-90	45-60	18-33	2-12
	11-16	Very gravelly loam, very gravelly silt loam	GC-GM, GC	A-4, A-2	0	0-10	50-60	40-50	35-50	25-40	21-31	6-12
	16-33	Very gravelly silt loam, very gravelly loam	GC	A-2, A-4, A-1	0	0-40	55-70	40-50	30-45	20-40	21-34	6-15
	33-43	Weathered bedrock			---	---	---	---	---	---	---	---
90: Pits, gravel----	0-60	Gravel, cobbles	GP	A-1	---	---	---	---	---	---	---	---
91: Povey-----	0-5	Gravelly loam	GM, SM	A-4	0	0-13	65-80	55-70	45-60	35-50	27-50	4-11
	5-12	Very gravelly loam, very gravelly sandy loam, very cobbly loam	GM	A-2	0-5	10-35	40-60	35-55	25-45	15-35	25-43	6-13
	12-20	Very cobbly loam	GC, SC	A-6, A-2, A-4	0	30-40	45-65	35-55	25-45	20-40	28-43	10-17
	20-35	Very gravelly sandy loam, extremely gravelly sandy loam, extremely gravelly loam	GC	A-1, A-2	0-15	10-30	40-55	35-50	25-45	10-30	20-33	4-12
	35-60	Extremely gravelly sandy loam	GC-GM, GC	A-2	0	10-35	25-45	20-40	15-35	10-25	15-25	4-15
Hades-----	0-20	Silt loam	CL	A-6	0	0	75-100	75-100	60-95	50-85	29-41	12-17
	20-42	Silty clay loam	CL	A-7	0	0	100	95-100	80-95	75-85	39-49	19-25
	42-60	Gravelly silty clay loam	GC, CL	A-7	0	10-20	65-75	60-75	50-60	45-55	36-45	18-25

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
91: Hondoho-----	0-14	Gravelly silt loam	GC, GC-GM, SC-SM, CL, SC	A-6, A-4	0	0-9	66-76	51-76	45-76	37-64	28-43	7-17
	14-28	Very gravelly silt loam, very cobbly loam	GC-GM, GC	A-6, A-4, A-2	0	10-45	55-75	50-70	40-60	25-45	28-43	10-17
	28-60	Very cobbly loam, very gravelly silt loam, very gravelly coarse sandy loam	GM, GC-GM, SC-SM	A-1, A-2	0	15-55	55-75	50-70	35-55	15-35	16-32	2-13
92: Povey-----	0-5	Gravelly loam	GM, SM	A-4	0	0-13	65-80	55-70	45-60	35-50	27-50	4-11
	5-12	Very gravelly loam, very gravelly sandy loam, very cobbly loam	GM	A-2	0-5	10-35	40-60	35-55	25-45	15-35	25-43	6-13
	12-20	Very cobbly loam	GC, SC	A-4, A-2, A-6	0	30-40	45-65	35-55	25-45	20-40	28-43	10-17
	20-35	Very gravelly sandy loam, extremely gravelly sandy loam, extremely gravelly loam	GC	A-2, A-1	0-15	10-30	40-55	35-50	25-45	10-30	20-33	4-12
	35-60	Extremely gravelly sandy loam	GC-GM, GC	A-2	0	10-35	25-45	20-40	15-35	10-25	15-25	4-15

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
92: Ireland-----	0-8	Very gravelly silt loam	GM, GC	A-2, A-4	0	10-25	40-65	35-60	35-55	30-45	25-36	6-10
	8-28	Extremely cobblely silt loam, extremely stony silt loam, extremely cobblely loam	GC	A-2, A-4	5-50	25-70	60-70	55-65	40-45	25-40	27-39	10-15
	28-38	Unweathered bedrock			---	---	---	---	---	---	---	---
Calpac-----	0-8	Gravelly silt loam	GM, SM	A-4	0	0-5	55-80	50-80	40-60	35-45	27-40	6-12
	8-15	Very gravelly silt loam	GM, GC	A-4, A-2	0	5-15	40-50	35-45	30-40	25-40	25-37	6-12
	15-23	Extremely cobblely silt loam	GC	A-2	0-15	45-60	30-50	25-45	25-35	20-35	31-43	12-17
	23-60	Extremely cobblely silt loam, extremely cobblely loam	GC	A-2	0-15	55-65	25-50	20-45	20-25	20-25	31-41	12-17
93: Povey-----	0-5	Gravelly loam	GM, SM	A-4	0	0-13	65-80	55-70	45-60	35-50	27-50	4-11
	5-12	Very gravelly loam, very gravelly sandy loam, very cobblely loam	GM	A-2	0-5	10-35	40-60	35-55	25-45	15-35	25-43	6-13
	12-20	Very cobblely loam	GC, SC	A-6, A-4, A-2	0	30-40	45-65	35-55	25-45	20-40	28-43	10-17
	20-35	Very gravelly sandy loam, extremely gravelly sandy loam, extremely gravelly loam	GC	A-2, A-1	0-15	10-30	40-55	35-50	25-45	10-30	20-33	4-12
	35-60	Extremely gravelly sandy loam	GC, GC-GM	A-2	0	10-35	25-45	20-40	15-35	10-25	15-25	4-15

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
93: Pavohroo-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	100	100	100	90-100	---	---
	1-7	Gravelly silt loam	ML, CL-ML	A-4	0	0-10	70-80	65-75	55-65	50-60	27-46	6-12
	7-16	Silt loam	CL	A-4, A-6	0	0-5	90-100	85-95	80-90	70-80	31-46	10-18
	16-39	Gravelly silt loam	ML, CL-ML	A-4	0	0-10	70-80	65-75	55-65	50-60	27-46	6-12
	39-61	Gravelly clay loam	GC	A-7, A-6	0	5-10	60-70	55-65	50-60	40-50	38-50	19-23
94: Povirt-----	0-10	Silty clay loam	CL	A-7	0	0	100	100	90-100	90-100	40-57	19-29
	10-20	Silty clay	CL, CH	A-7	0	0	100	100	90-100	90-100	40-66	19-36
	20-60	Silty clay	CH	A-7	0	0	100	100	90-100	90-100	50-70	29-44
95: Raldridge-----	0-3	Gravelly loam	CL	A-6, A-4	0	0	70-80	65-75	50-70	50-60	28-41	10-17
	3-14	Gravelly silty clay loam	CL	A-7	0	0-10	70-80	65-75	55-75	50-70	39-49	19-25
	14-22	Very gravelly clay loam	GC	A-2	0	5-10	35-45	30-40	25-35	20-30	39-46	19-22
	22-60	Very gravelly loam	GC	A-2	0	5-10	35-45	30-40	20-35	15-30	26-33	9-13
96: Rexburg-----	0-14	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	24-35	7-12
	14-22	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	26-35	9-12
	22-60	Silt loam, silt	CL	A-4	0	0	100	100	95-100	80-100	21-29	6-10
97: Rexburg-----	0-14	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	24-35	7-12
	14-22	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	26-35	9-12
	22-60	Silt loam, silt	CL	A-4	0	0	100	100	95-100	80-100	21-29	6-10
Arbone-----	0-15	Silt loam	CL	A-4	0	0	85-100	80-90	70-90	70-85	25-35	8-12
	15-60	Gravelly silt loam, gravelly loam	GC	A-4	0	0-5	60-80	55-75	50-70	40-60	24-31	8-12
Ririe-----	0-14	Silt loam	CL	A-4, A-6	0	0	95-100	95-100	95-100	75-90	29-37	9-12
	14-63	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	23-31	7-12

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
98:												
Rexburg-----	0-14	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	24-35	7-12
	14-22	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	26-35	9-12
	22-60	Silt loam, silt	CL	A-4	0	0	100	100	95-100	80-100	21-29	6-10
Arbone-----	0-15	Silt loam	CL	A-4	0	0	85-100	80-90	70-90	70-85	25-35	8-12
	15-60	Gravelly silt loam, gravelly loam	GC	A-4	0	0-5	60-80	55-75	50-70	40-60	24-31	8-12
Ririe-----	0-14	Silt loam	CL	A-6, A-4	0	0	95-100	95-100	95-100	75-90	29-37	9-12
	14-63	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	23-31	7-12
99:												
Rexburg-----	0-14	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	24-35	7-12
	14-22	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	26-35	9-12
	22-60	Silt loam, silt	CL	A-4	0	0	100	100	95-100	80-100	21-29	6-10
Iphil-----	0-10	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	20-35	3-12
	10-36	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	22-33	6-12
	36-60	Loam, silt loam	CL	A-4	0	0	95-100	95-100	90-100	70-90	23-31	7-12
Watercanyon----	0-5	Silt loam	CL	A-4	0	0	100	100	95-100	90-100	22-33	6-12
	5-33	Silt loam, very fine sandy loam, silt	ML, CL-ML	A-4	0	0	100	100	95-100	75-100	17-29	2-10
	33-62	Silt loam, very fine sandy loam	CL-ML, ML	A-4	0	0	100	100	95-100	75-100	17-29	2-10
100:												
Rexburg-----	0-14	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	24-35	7-12
	14-22	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	26-35	9-12
	22-60	Silt loam, silt	CL	A-4	0	0	100	100	95-100	80-100	21-29	6-10
Lanoak-----	0-30	Silt loam	ML	A-4	0	0	100	100	95-100	90-100	27-41	6-13
	30-49	Silt loam	ML	A-4	0	0	100	100	95-100	90-100	27-41	6-13
	49-60	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	31-45	12-19
101:												
Rexburg-----	0-14	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	24-35	7-12
	14-22	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	26-35	9-12
	22-60	Silt loam, silt	CL	A-4	0	0	100	100	95-100	80-100	21-29	6-10

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
101:												
Lanoak-----	0-30	Silt loam	ML	A-4	0	0	100	100	95-100	90-100	27-41	6-13
	30-49	Silt loam	ML	A-4	0	0	100	100	95-100	90-100	27-41	6-13
	49-60	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	31-45	12-19
102:												
Rexburg-----	0-14	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	24-35	7-12
	14-22	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	26-35	9-12
	22-60	Silt loam, silt	CL	A-4	0	0	100	100	95-100	80-100	21-29	6-10
Lanoak-----	0-30	Silt loam	ML	A-4	0	0	100	100	95-100	90-100	27-41	6-13
	30-49	Silt loam	ML	A-4	0	0	100	100	95-100	90-100	27-41	6-13
	49-60	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	31-45	12-19
Watercanyon----	0-5	Silt loam	CL	A-4	0	0	100	100	95-100	90-100	22-33	6-12
	5-33	Silt loam, very fine sandy loam, silt	ML, CL-ML	A-4	0	0	100	100	95-100	75-100	17-29	2-10
	33-62	Silt loam, very fine sandy loam	ML, CL-ML	A-4	0	0	100	100	95-100	75-100	17-29	2-10
103:												
Rexburg-----	0-14	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	24-35	7-12
	14-22	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	26-35	9-12
	22-60	Silt loam, silt	CL	A-4	0	0	100	100	95-100	80-100	21-29	6-10
Ririe-----	0-14	Silt loam	CL	A-4, A-6	0	0	95-100	95-100	95-100	75-90	29-37	9-12
	14-60	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	23-31	7-12
Kucera-----	0-22	Silt loam	CL	A-4	0	0	100	100	100	90-100	25-40	6-12
	22-42	Silt loam	CL	A-4	0	0	100	100	95-100	85-100	22-35	6-12
	42-60	Silt loam	CL	A-4	0	0	100	100	100	90-100	21-31	6-12
104:												
Rexburg-----	0-14	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	24-35	7-12
	14-22	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	26-35	9-12
	22-60	Silt loam, silt	CL	A-4	0	0	100	100	95-100	80-100	21-29	6-10
Thatcher-----	0-7	Silt loam	CL	A-6, A-4	0	0	95-100	90-100	90-100	70-90	30-41	10-17
	7-35	Silty clay loam, clay loam	CL	A-6, A-7	0	0	95-100	95-100	95-100	85-95	38-47	19-24
	35-60	Silt loam, fine sandy loam, loam	CL	A-4, A-6	0	0	95-100	90-100	70-100	45-90	23-37	7-17

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
104:												
Ririe-----	0-14	Silt loam	CL	A-4, A-6	0	0	95-100	95-100	95-100	75-90	29-37	9-12
	14-60	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	23-31	7-12
105:												
Rexburg-----	0-14	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	24-35	7-12
	14-22	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	26-35	9-12
	22-60	Silt loam, silt	CL	A-4	0	0	100	100	95-100	80-100	21-29	6-10
Watercanyon----	0-5	Silt loam	CL	A-4	0	0	100	100	95-100	90-100	22-33	6-12
	5-33	Silt loam, very fine sandy loam, silt	CL-ML, ML	A-4	0	0	100	100	95-100	75-100	17-29	2-10
	33-62	Silt loam, very fine sandy loam	ML, CL-ML	A-4	0	0	100	100	95-100	75-100	17-29	2-10
Lanoak-----	0-30	Silt loam	ML	A-4	0	0	100	100	95-100	90-100	27-41	6-13
	30-49	Silt loam	ML	A-4	0	0	100	100	95-100	90-100	27-41	6-13
	49-60	Silt loam	CL	A-6	0	0	100	100	95-100	90-100	31-45	12-19
106:												
Ridgecrest-----	0-9	Very gravelly silt loam	GC, GC-GM	A-2, A-4	0	10-20	45-65	40-60	35-55	30-50	26-37	7-11
	9-13	Very cobbly silt loam	GC-GM, GC	A-4	0	30-55	65-80	60-75	50-65	40-55	26-37	7-11
	13-31	Very cobbly silt loam, very cobbly loam	SC, GC, GC-GM	A-4	0	30-55	65-80	60-75	50-65	40-55	24-34	7-11
	31-35	Extremely cobbly sandy loam	GC-GM	A-2	0	55-80	35-55	30-50	20-40	10-30	20-29	4-10
	35-45	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
106: Hondoho-----	0-14	Gravelly silt loam	SC-SM, CL, SC, GC, GC- GM	A-6, A-4	0	0-9	66-76	51-76	45-76	37-64	28-43	7-17
	14-28	Very gravelly silt loam, very cobbly loam	GC, GC-GM	A-6, A-4, A-2	0	10-45	55-75	50-70	40-60	25-45	28-43	10-17
	28-60	Very cobbly loam, very gravelly silt loam, very gravelly coarse sandy loam	GC-GM, GM, SC-SM	A-2, A-1	0	15-55	55-75	50-70	35-55	15-35	16-32	2-13
107: Ridgecrest-----	0-9	Very gravelly silt loam	GC-GM, GC	A-2, A-4	0	10-20	45-65	40-60	35-55	30-50	26-37	7-11
	9-13	Very cobbly silt loam	GC-GM, GC	A-4	0	30-55	65-80	60-75	50-65	40-55	26-37	7-11
	13-31	Very cobbly silt loam, very cobbly loam	GC-GM, SC, GC	A-4	0	30-55	65-80	60-75	50-65	40-55	24-34	7-11
	31-35	Extremely cobbly sandy loam	GC-GM	A-2	0	55-80	35-55	30-50	20-40	10-30	20-29	4-10
	35-45	Unweathered bedrock			---	---	---	---	---	---	---	---
Hondoho-----	0-14	Gravelly silt loam	CL, SC, SC- SM, GC, GC- GM	A-6, A-4	0	0-9	66-76	51-76	45-76	37-64	28-43	7-17
	14-28	Very gravelly silt loam, very cobbly loam	GC-GM, GC	A-2, A-4, A-6	0	10-45	55-75	50-70	40-60	25-45	28-43	10-17
	28-60	Very cobbly loam, very gravelly silt loam, very gravelly coarse sandy loam	GC-GM, SC-SM, GM	A-1, A-2	0	15-55	55-75	50-70	35-55	15-35	16-32	2-13

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
107: Hymas-----	0-2	Very cobbly loam	GC	A-2	5-15	25-45	40-60	35-55	25-45	15-35	25-33	6-10
	2-7	Very cobbly silt loam, very gravelly loam, very stony loam	GC, SC	A-2, A-4	5-15	30-45	50-75	45-70	35-55	25-45	22-33	6-12
	7-11	Extremely cobbly loam, very cobbly loam, very gravelly loam	GC	A-2	5-20	25-65	35-50	30-45	20-35	10-30	21-31	6-12
	11-21	Unweathered bedrock			---	---	---	---	---	---	---	---
108: Ridgecrest-----	0-9	Very gravelly silt loam	GC, GC-GM	A-4, A-2	0	10-20	45-65	40-60	35-55	30-50	26-37	7-11
	9-13	Very cobbly silt loam	GC, GC-GM	A-4	0	30-55	65-80	60-75	50-65	40-55	26-37	7-11
	13-31	Very cobbly silt loam, very cobbly loam	GC-GM, SC, GC	A-4	0	30-55	65-80	60-75	50-65	40-55	24-34	7-11
	31-35	Extremely cobbly sandy loam	GC-GM	A-2	0	55-80	35-55	30-50	20-40	10-30	20-29	4-10
	35-45	Unweathered bedrock			---	---	---	---	---	---	---	---
Hondoho-----	0-14	Gravelly silt loam	GC, GC-GM, SC, SC-SM, CL	A-6, A-4	0	0-9	66-76	51-76	45-76	37-64	28-43	7-17
	14-28	Very gravelly silt loam, very cobbly loam	GC-GM, GC	A-6, A-4, A-2	0	10-45	55-75	50-70	40-60	25-45	28-43	10-17
	28-60	Very cobbly loam, very gravelly silt loam, very gravelly coarse sandy loam	SC-SM, GC-GM, GM	A-1, A-2	0	15-55	55-75	50-70	35-55	15-35	16-32	2-13

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
108: Lizdale-----	0-7	Very gravelly silt loam	GC	A-4, A-2	0	5-15	40-50	35-45	30-40	25-40	25-37	6-12
	7-10	Very gravelly loam, very gravelly sandy loam	GC	A-2	0	0-10	45-60	35-50	30-45	25-35	22-35	6-12
	10-36	Very gravelly sandy loam	GC	A-1, A-2	0	0-10	45-65	40-55	30-40	20-30	22-33	6-10
	36-52	Extremely gravelly sandy loam	GW	A-1	0	0-10	20-30	15-25	5-10	0-5	0-36	NP-17
	52-60	Extremely gravelly loamy sand	GP-GM, GC-GM	A-1	0	0-10	10-40	5-35	5-30	5-15	0-23	NP-6
109: Ridgecrest-----	0-9	Very gravelly silt loam	GC-GM, GC	A-2, A-4	0	10-20	45-65	40-60	35-55	30-50	26-37	7-11
	9-13	Very cobbly silt loam	GC-GM, GC	A-4	0	30-55	65-80	60-75	50-65	40-55	26-37	7-11
	13-31	Very cobbly silt loam, very cobbly loam	SC, GC-GM, GC	A-4	0	30-55	65-80	60-75	50-65	40-55	24-34	7-11
	31-35	Extremely cobbly sandy loam	GC-GM	A-2	0	55-80	35-55	30-50	20-40	10-30	20-29	4-10
	35-45	Unweathered bedrock			---	---	---	---	---	---	---	---
Hymas-----	0-2	Very cobbly loam	GC	A-2	5-15	25-45	40-60	35-55	25-45	15-35	25-33	6-10
	2-7	Very cobbly silt loam, very gravelly loam, very stony loam	GC, SC	A-2, A-4	5-15	30-45	50-75	45-70	35-55	25-45	22-33	6-12
	7-11	Extremely cobbly loam, very cobbly loam, very gravelly loam	GC	A-2	5-20	25-65	35-50	30-45	20-35	10-30	21-31	6-12
	11-21	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
110:												
Ririe-----	0-14	Silt loam	CL	A-6, A-4	0	0	95-100	95-100	95-100	75-90	29-37	9-12
	14-60	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	23-31	7-12
Buist-----	0-15	Gravelly silt loam	CL, GC	A-4	0-5	0-10	70-85	65-80	60-75	45-65	24-31	8-12
	15-28	Very gravelly loam, gravelly silt loam	GC	A-4, A-2	0	0	45-70	35-60	30-55	20-50	27-39	10-15
	28-60	Extremely gravelly fine sandy loam	GM	A-1	0	10-30	15-30	10-25	5-25	5-20	17-24	2-6
111:												
Ririe-----	0-14	Silt loam	CL	A-6, A-4	0	0	95-100	95-100	95-100	75-90	29-37	9-12
	14-60	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	23-31	7-12
Cedarhill-----	0-7	Gravelly silt loam	CL	A-6	0-5	0-15	65-80	60-75	55-70	50-65	29-43	9-18
	7-12	Gravelly loam, gravelly silt loam	CL	A-6	0	0-15	65-80	60-75	55-70	50-65	30-38	12-17
	12-27	Gravelly loam, very gravelly loam, gravelly silt loam	GC	A-4, A-2	0	0-15	45-65	35-60	25-50	15-40	22-32	6-11
	27-60	Extremely gravelly loam, extremely cobbly loam	GP-GC, GC-GM	A-1	0-10	10-50	40-60	30-50	20-40	10-30	0-33	NP-12
112:												
Ririe-----	0-14	Silt loam	CL	A-4, A-6	0	0	95-100	95-100	95-100	75-90	29-37	9-12
	14-60	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	23-31	7-12

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
112: Cedarhill-----	0-7	Gravelly silt loam	CL	A-6	0-5	0-15	65-80	60-75	55-70	50-65	29-43	9-18
	7-12	Gravelly loam, gravelly silt loam	CL	A-6	0	0-15	65-80	60-75	55-70	50-65	30-38	12-17
	12-27	Gravelly loam, very gravelly loam, gravelly silt loam	GC	A-4, A-2	0	0-15	45-65	35-60	25-50	15-40	22-32	6-11
	27-60	Extremely gravelly loam, extremely cobbley loam	GP-GC, GC-GM	A-1	0-10	10-50	40-60	30-50	20-40	10-30	0-33	NP-12
113: Ririe-----	0-14	Silt loam	CL	A-6, A-4	0	0	95-100	95-100	95-100	75-90	29-37	9-12
	14-60	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	23-31	7-12
Hondoho-----	0-14	Gravelly silt loam	GC, GC-GM, SC, SC-SM, CL	A-6, A-4	0	0-9	66-76	51-76	45-76	37-64	28-43	7-17
	14-28	Very gravelly silt loam, very cobbley loam	GC-GM, GC	A-6, A-4, A-2	0	10-45	55-75	50-70	40-60	25-45	28-43	10-17
	28-60	Very cobbley loam, very gravelly silt loam, very gravelly coarse sandy loam	GC-GM, GM, SC-SM	A-2, A-1	0	15-55	55-75	50-70	35-55	15-35	16-32	2-13
114: Ririe-----	0-14	Silt loam	CL	A-4, A-6	0	0	95-100	95-100	95-100	75-90	29-37	9-12
	14-60	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	23-31	7-12
Iphil-----	0-10	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	20-35	3-12
	10-36	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	22-33	6-12
	36-60	Loam, silt loam	CL	A-4	0	0	95-100	95-100	90-100	70-90	23-31	7-12
Kucera-----	0-22	Silt loam	CL	A-4	0	0	100	100	100	90-100	25-40	6-12
	22-42	Silt loam	CL	A-4	0	0	100	100	95-100	85-100	22-35	6-12
	42-60	Silt loam	CL	A-4	0	0	100	100	100	90-100	21-31	6-12

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
115:												
Ririe-----	0-14	Silt loam	CL	A-4, A-6	0	0	95-100	95-100	95-100	75-90	29-37	9-12
	14-60	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	23-31	7-12
Iphil-----	0-10	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	20-35	3-12
	10-36	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	22-33	6-12
	36-60	Loam, silt loam	CL	A-4	0	0	95-100	95-100	90-100	70-90	23-31	7-12
Rexburg-----	0-14	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	24-35	7-12
	14-22	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	26-35	9-12
	22-60	Silt loam, silt	CL	A-4	0	0	100	100	95-100	80-100	21-29	6-10
116:												
Ririe-----	0-14	Silt loam	CL	A-4, A-6	0	0	95-100	95-100	95-100	75-90	29-37	9-12
	14-63	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	23-31	7-12
Rexburg-----	0-14	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	24-35	7-12
	14-22	Silt loam	CL	A-4	0	0	100	100	95-100	80-100	26-35	9-12
	22-60	Silt loam, silt	CL	A-4	0	0	100	100	95-100	80-100	21-29	6-10
117:												
Ririe-----	0-14	Silt loam	CL	A-4, A-6	0	0	95-100	95-100	95-100	75-90	29-37	9-12
	14-63	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	23-31	7-12
Watercanyon----	0-5	Silt loam	CL	A-4	0	0	100	100	95-100	90-100	22-33	6-12
	5-33	Silt loam, very fine sandy loam, silt	ML, CL-ML	A-4	0	0	100	100	95-100	75-100	17-29	2-10
	33-62	Silt loam, very fine sandy loam	ML, CL-ML	A-4	0	0	100	100	95-100	75-100	17-29	2-10
118:												
Ririe-----	0-14	Silt loam	CL	A-4, A-6	0	0	95-100	95-100	95-100	75-90	29-37	9-12
	14-63	Silt loam	CL	A-4	0	0	95-100	95-100	95-100	75-90	23-31	7-12
Watercanyon----	0-5	Silt loam	CL	A-4	0	0	100	100	95-100	90-100	22-33	6-12
	5-33	Silt loam, very fine sandy loam, silt	CL-ML, ML	A-4	0	0	100	100	95-100	75-100	17-29	2-10
	33-62	Silt loam, very fine sandy loam	ML, CL-ML	A-4	0	0	100	100	95-100	75-100	17-29	2-10

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
119: Samaria-----	0-5	Silt loam	CL	A-6	0	0-5	95-100	90-100	85-95	80-90	30-42	11-15
	5-16	Gravelly silt loam, gravelly loam	CL	A-6	0	0-5	70-80	65-75	60-70	55-65	28-39	11-15
	16-27	Gravelly loam	CL	A-6	0	0-5	70-80	65-75	60-70	50-60	28-35	12-16
	27-64	Gravelly sandy loam	GC	A-6	0	0-10	60-70	55-65	45-55	35-45	26-34	11-16
120: Samaria-----	0-5	Silt loam	CL	A-6	0	0-5	95-100	90-100	85-95	80-90	30-42	11-15
	5-16	Gravelly silt loam, gravelly loam	CL	A-6	0	0-5	70-80	65-75	60-70	55-65	28-39	11-15
	16-27	Gravelly loam	CL	A-6	0	0-5	70-80	65-75	60-70	50-60	28-35	12-16
	27-64	Gravelly sandy loam	GC	A-6	0	0-10	60-70	55-65	45-55	35-45	26-34	11-16
121: Samaria-----	0-5	Silt loam	CL	A-6	0	0-5	95-100	90-100	85-95	80-90	30-42	11-15
	5-16	Gravelly silt loam, gravelly loam	CL	A-6	0	0-5	70-80	65-75	60-70	55-65	28-39	11-15
	16-27	Gravelly loam	CL	A-6	0	0-5	70-80	65-75	60-70	50-60	28-35	12-16
	27-64	Gravelly sandy loam	GC	A-6	0	0-10	60-70	55-65	45-55	35-45	26-34	11-16
Pollynot-----	0-7	Silt loam	CL	A-6, A-4	0	0	100	95-100	85-95	75-85	28-45	10-17
	7-17	Silt loam	CL	A-4, A-6	0	0	100	95-100	85-95	75-85	28-45	10-17
	17-41	Silt loam, loam	CL	A-4	0	0-5	90-100	85-100	80-90	55-75	25-35	8-12
	41-56	Very gravelly sandy loam	GC	A-2, A-1	0	0-10	45-65	40-55	30-40	20-30	22-33	6-10
	56-60	Extremely gravelly loam	GP-GC, GC-GM	A-1	0	0-15	15-30	10-25	10-20	5-20	19-26	3-7
122: Samaria-----	0-5	Silt loam	CL	A-6	0	0-5	95-100	90-100	85-95	80-90	30-42	11-15
	5-16	Gravelly silt loam, gravelly loam	CL	A-6	0	0-5	70-80	65-75	60-70	55-65	28-39	11-15
	16-27	Gravelly loam	CL	A-6	0	0-5	70-80	65-75	60-70	50-60	28-35	12-16
	27-64	Gravelly sandy loam	GC	A-6	0	0-10	60-70	55-65	45-55	35-45	26-34	11-16

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
122: Sterling-----	0-13	Very gravelly loam	GM, GC	A-2	0-10	15-30	40-55	35-50	25-40	10-35	25-39	6-13
	13-66	Very gravelly loam, extremely gravelly loam	GC	A-2	0-10	10-20	35-55	25-50	20-40	10-35	21-39	6-15
123: Sterling-----	0-13	Very gravelly loam	GC, GM	A-2	0-10	15-30	40-55	35-50	25-40	10-35	25-39	6-13
	13-66	Very gravelly loam, extremely gravelly loam	GC	A-2	0-10	10-20	35-55	25-50	20-40	10-35	21-39	6-15
124: Thatcher-----	0-7	Silt loam	CL	A-4, A-6	0	0	95-100	90-100	90-100	70-90	30-41	10-17
	7-35	Silty clay loam, clay loam	CL	A-6, A-7	0	0	95-100	95-100	95-100	85-95	38-47	19-24
	35-60	Silt loam, fine sandy loam, loam	CL	A-4, A-6	0	0	95-100	90-100	70-100	45-90	23-37	7-17
125: Thatcher-----	0-7	Silt loam	CL	A-4, A-6	0	0	95-100	90-100	90-100	70-90	30-41	10-17
	7-35	Silty clay loam, clay loam	CL	A-7, A-6	0	0	95-100	95-100	95-100	85-95	38-47	19-24
	35-60	Silt loam, fine sandy loam, loam	CL	A-6, A-4	0	0	95-100	90-100	70-100	45-90	23-37	7-17
Jensen-----	0-12	Silt loam	CL	A-6, A-4	0	0	85-100	85-100	70-90	65-85	28-41	9-15
	12-45	Gravelly silt loam, silt loam, gravelly loam	GC, CL	A-6	0	0	60-90	55-85	45-70	40-65	31-41	12-17
	45-60	Very gravelly loam, very gravelly silt loam, gravelly loam	GC-GM, GC	A-2	0	0-5	30-65	25-60	20-40	10-35	25-34	9-15

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
126: Freedom-----	0-13	Silt loam	CL	A-6	0	0	100	100	90-100	85-95	31-45	12-19
	13-34	Silt loam	CL	A-6	0	0	100	100	95-100	90-95	31-45	12-19
	34-60	Silt loam, silty clay loam	CL	A-6	0	0	100	100	95-100	90-95	27-47	10-25
127: Tickason-----	0-10	Very fine sandy loam	CL-ML	A-4	0	0	100	100	85-100	65-80	22-32	6-9
	10-23	Fine sandy loam, very fine sandy loam, loam	CL	A-4	0	0	100	95-100	80-100	50-75	22-35	6-12
	23-31	Fine sandy loam, very fine sandy loam, loam	CL	A-4	0	0	100	95-100	80-100	50-75	21-31	6-12
	31-38	Loam, fine sandy loam	CL	A-4	0	0	90-100	85-100	75-100	50-90	21-31	6-12
	38-60	Loam	CL	A-4	0	0	100	95-100	80-100	50-75	22-35	6-12
128: Tickason-----	0-10	Very fine sandy loam	CL-ML	A-4	0	0	100	100	85-100	65-80	22-32	6-9
	10-23	Very fine sandy loam, loam, fine sandy loam	CL	A-4	0	0	100	95-100	80-100	50-75	22-35	6-12
	23-31	Loam, very fine sandy loam, fine sandy loam	CL	A-4	0	0	100	95-100	80-100	50-75	21-31	6-12
	31-38	Fine sandy loam, loam	CL	A-4	0	0	90-100	85-100	75-100	50-90	21-31	6-12
	38-60	Loam	CL	A-4	0	0	100	95-100	80-100	50-75	22-35	6-12
129: Tirod-----	0-18	Silt loam	CL	A-6	0	0	95-100	90-100	85-95	80-90	33-47	12-19
	18-30	Loam	CL	A-6	0	0	90-100	85-100	80-90	75-85	33-47	12-19
	30-40	Clay loam, loam	CL	A-6, A-7	0	0	90-100	85-95	75-85	65-75	34-51	15-25
	40-62	Loam	CL	A-6	0	0	80-90	75-90	60-80	50-75	32-40	13-19

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
130: Toefoot-----	0-26	Silt loam	CL	A-4	0	0	95-100	90-100	80-90	75-85	27-40	8-12
	26-33	Gravelly loam	CL	A-4	0	0	55-100	55-100	55-90	55-85	25-34	8-11
	33-40	Gravelly loam, very gravelly sandy loam	GC	A-2, A-4	0	0	50-80	40-75	30-65	15-40	25-34	8-11
	40-62	Silt loam	CL	A-4	0	0	95-100	90-100	80-90	75-85	24-30	8-11
131: Welby-----	0-11	Silt loam	CL	A-4	0	0	100	100	95-100	75-90	25-35	6-12
	11-36	Silt loam, loam	CL	A-4	0	0	100	100	95-100	75-90	21-35	6-12
	36-60	Fine sandy loam	CL-ML	A-4	0	0	100	100	80-95	60-70	17-31	2-12
Parleys-----	0-5	Silt loam	CL	A-6	0	0	100	100	95-100	80-90	31-45	11-18
	5-26	Silty clay loam	CL	A-7	0	0	100	100	100	90-100	39-51	19-25
	26-64	Silt loam, loam	CL	A-6	0	0	100	100	95-100	70-95	27-38	12-19
132: Wursten-----	0-16	Gravelly silt loam	CL	A-4	0	0-10	65-80	60-75	55-75	50-65	25-33	8-12
	16-60	Gravelly loam, gravelly silt loam	CL	A-4	0	5-10	60-80	55-75	55-75	45-60	23-31	8-12
133: Yago-----	0-10	Very stony silty clay loam	CL	A-7	15-25	15-25	65-90	60-85	55-80	45-70	41-51	19-22
	10-40	Very cobbly clay loam, very cobbly silty clay loam	SC, CH, CL, GC	A-7	0-5	40-55	60-80	55-75	50-70	40-60	45-57	23-29
	40-60	Very cobbly silty clay loam, very cobbly silt loam	CL	A-6, A-7	0	35-50	75-95	70-90	65-85	55-80	35-50	16-24

Table 13.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
133: Manila-----	0-5	Silt loam	CL	A-6	0	0	95-100	90-100	85-95	70-90	33-47	12-19
	5-19	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	85-95	75-90	47-57	25-29
	19-45	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	85-95	70-90	47-70	25-40
	45-60	Silt loam, loam	CL	A-4	0	0	95-100	90-100	85-95	70-90	22-30	7-12
134: Water-----	---	---	---	---	---	---	---	---	---	---	---	---

Table 14.--Physical Properties of the Soils

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
1:												
Araveton-----	0-8	16-26	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	2.0-4.0	.37	.43	5	6	48
	8-36	18-26	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	1.0-3.0	.32	.43			
	36-62	18-24	1.30-1.40	0.60-2.00	0.11-0.14	3.0-5.9	0.5-1.0	.32	.43			
Hades-----	0-20	18-25	1.20-1.40	0.60-2.00	0.15-0.18	0.0-2.9	1.0-3.0	.32	.43	5	6	48
	20-42	27-35	1.30-1.40	0.20-0.60	0.19-0.21	3.0-5.9	1.0-2.0	.37	.37			
	42-60	27-35	1.30-1.40	0.20-0.60	0.16-0.18	0.0-2.9	0.5-1.0	.15	.32			
2:												
Arbone-----	0-15	13-18	1.30-1.50	0.60-2.00	0.14-0.17	0.0-2.9	1.0-3.0	.43	.49	5	5	56
	15-60	13-18	1.35-1.55	0.60-2.00	0.12-0.15	0.0-2.9	0.5-1.0	.32	.49			
3:												
Arbone-----	0-15	13-18	1.30-1.50	0.60-2.00	0.14-0.17	0.0-2.9	1.0-3.0	.43	.49	5	5	56
	15-60	13-18	1.35-1.55	0.60-2.00	0.12-0.15	0.0-2.9	0.5-1.0	.32	.49			
4:												
Arbone-----	0-15	13-18	1.30-1.50	0.60-2.00	0.14-0.17	0.0-2.9	1.0-3.0	.43	.49	5	5	56
	15-60	13-18	1.35-1.55	0.60-2.00	0.12-0.15	0.0-2.9	0.5-1.0	.32	.49			
5:												
Arbone-----	0-15	13-18	1.30-1.50	0.60-2.00	0.14-0.17	0.0-2.9	1.0-3.0	.43	.49	5	5	56
	15-60	13-18	1.35-1.55	0.60-2.00	0.12-0.15	0.0-2.9	0.5-1.0	.32	.49			
Hondoho-----	0-14	12-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	2.0-3.0	.20	.37	3	6	48
	14-28	15-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	1.0-3.0	.20	.37			
	28-60	5-19	1.35-1.50	2.00-6.00	0.04-0.07	0.0-2.9	0.0-1.0	.05	.28			
Cedarhill-----	0-7	15-27	1.20-1.35	0.57-1.98	0.10-0.12	0.0-2.9	2.0-3.0	.20	.37	5	7	38
	7-12	18-24	1.30-1.40	0.60-2.00	0.11-0.14	3.0-5.9	0.5-1.0	.32	.43			
	12-27	10-17	1.30-1.40	0.60-2.00	0.10-0.13	0.0-2.9	1.0-2.0	.17	.43			
	27-60	2-18	1.20-2.00	0.57-5.95	0.03-0.08	0.0-3.0	1.0-2.0	.15	.24			
6:												
Arbone-----	0-15	13-18	1.30-1.50	0.60-2.00	0.12-0.15	0.0-2.9	1.0-3.0	.28	.43	5	5	56
	15-60	13-18	1.35-1.55	0.60-2.00	0.12-0.15	0.0-2.9	0.5-1.0	.32	.49			
Hondoho-----	0-14	12-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	2.0-3.0	.20	.37	3	6	48
	14-28	15-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	1.0-3.0	.20	.37			
	28-60	5-19	1.35-1.50	2.00-6.00	0.04-0.07	0.0-2.9	0.0-1.0	.05	.28			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
6: Cedarhill-----	0-7	15-27	1.20-1.35	0.57-1.98	0.10-0.12	0.0-2.9	2.0-3.0	.20	.37	5	7	38
	7-12	18-24	1.30-1.40	0.60-2.00	0.11-0.14	3.0-5.9	0.5-1.0	.32	.43			
	12-27	10-17	1.30-1.40	0.60-2.00	0.10-0.13	0.0-2.9	1.0-2.0	.17	.43			
	27-60	2-18	1.20-2.00	0.57-5.95	0.03-0.08	0.0-3.0	1.0-2.0	.15	.24			
7: Bayhook-----	0-7	5-18	1.25-1.35	0.20-0.60	0.18-0.21	0.0-2.9	1.0-2.0	.49	.49	5	4L	86
	7-13	10-19	1.30-1.50	0.20-0.60	0.18-0.21	0.0-2.9	0.5-1.0	.55	.55			
	13-60	5-17	1.30-1.50	0.20-0.60	0.18-0.21	0.0-2.9	0.0-0.5	.64	.64			
8: Bayhook-----	0-7	5-18	1.25-1.35	0.20-0.60	0.18-0.21	0.0-2.9	1.0-2.0	.49	.49	5	4L	86
	7-13	10-19	1.30-1.50	0.20-0.60	0.18-0.21	0.0-2.9	0.5-1.0	.55	.55			
	13-60	5-17	1.30-1.50	0.20-0.60	0.18-0.21	0.0-2.9	0.0-0.5	.64	.64			
Ecur-----	0-15	10-17	1.20-1.40	2.00-6.00	0.12-0.15	0.0-2.9	0.5-1.0	.28	.32	5	3	86
	15-37	10-17	1.20-1.40	2.00-6.00	0.12-0.17	0.0-2.9	0.5-1.0	.28	.32			
	37-44	0-5	1.45-1.60	6.00-20.00	0.04-0.06	0.0-2.9	0.5-1.0	.10	.10			
	44-49	4-8	1.40-1.60	6.00-20.00	0.07-0.10	0.0-2.9	0.0-0.5	.17	.24			
	49-60	0-5	1.45-1.60	6.00-20.00	0.04-0.06	0.0-2.9	0.5-1.0	.10	.10			
9: Bingham-----	0-6	10-20	1.35-1.45	0.60-2.00	0.10-0.14	0.0-2.9	2.0-4.0	.28	.37	5	6	48
	6-27	18-25	1.35-1.45	0.60-2.00	0.10-0.14	3.0-5.9	1.0-3.0	.24	.32			
	27-38	10-15	1.45-1.55	6.00-20.00	0.05-0.07	0.0-2.9	1.0-3.0	.15	.20			
	38-45	5-10	1.50-1.60	6.00-20.00	0.02-0.04	0.0-2.9	0.5-1.0	.10	.17			
	45-65	5-10	1.50-1.60	6.00-20.00	0.02-0.04	0.0-2.9	0.5-1.0	.10	.17			
10: Bingham-----	0-6	10-20	1.35-1.45	0.60-2.00	0.10-0.14	0.0-2.9	2.0-4.0	.28	.37	5	6	48
	6-27	18-25	1.35-1.45	0.60-2.00	0.10-0.14	3.0-5.9	1.0-3.0	.24	.32			
	27-38	10-15	1.45-1.55	6.00-20.00	0.05-0.07	0.0-2.9	1.0-3.0	.15	.20			
	38-45	5-10	1.50-1.60	6.00-20.00	0.02-0.04	0.0-2.9	0.5-1.0	.10	.17			
	45-65	5-10	1.50-1.60	6.00-20.00	0.02-0.04	0.0-2.9	0.5-1.0	.10	.17			
Tirod-----	0-18	18-27	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	2.0-4.0	.32	.32	5	6	48
	18-30	18-27	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	2.0-4.0	.32	.32			
	30-40	22-35	1.35-1.45	0.20-0.60	0.18-0.20	3.0-5.9	1.0-3.0	.32	.43			
	40-62	20-27	1.30-1.50	0.60-2.00	0.17-0.20	3.0-5.9	0.5-1.0	.37	.43			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
11:												
Bloor-----	0-12	10-20	1.30-1.50	0.60-2.00	0.11-0.18	0.0-2.9	1.0-2.0	.49	.49	5	5	56
	12-20	22-27	1.40-1.60	0.06-0.20	0.12-0.19	3.0-5.9	0.0-0.5	.43	.43			
	20-29	10-15	1.50-1.70	0.06-0.20	0.12-0.18	0.0-2.9	0.0-0.5	.49	.49			
	29-47	4-15	1.30-1.50	2.00-6.00	0.12-0.17	0.0-2.9	0.5-1.0	.37	.43			
	47-60	10-20	1.40-1.60	0.60-2.00	0.07-0.16	0.0-2.9	0.0-0.5	.43	.49			
Brinnum-----	0-9	18-27	1.20-1.30	0.60-2.00	0.11-0.13	3.0-5.9	0.5-1.0	.49	.49	5	4L	86
	9-31	18-27	1.20-1.40	0.20-0.60	0.08-0.10	3.0-5.9	0.5-1.0	.55	.55			
	31-60	18-35	1.25-1.45	0.20-0.60	0.08-0.10	3.0-5.9	0.0-0.5	.55	.55			
12:												
Bothwell-----	0-9	16-22	1.20-1.35	0.60-2.00	0.19-0.21	3.0-5.9	3.0-4.0	.37	.37	5	5	56
	9-20	22-35	1.30-1.40	0.60-2.00	0.19-0.21	3.0-5.9	1.0-3.0	.43	.43			
	20-45	28-35	1.35-1.45	0.20-0.60	0.19-0.21	3.0-5.9	0.5-2.0	.43	.43			
	45-60	18-35	1.30-1.50	0.60-2.00	0.19-0.21	3.0-5.9	0.5-1.0	.43	.43			
13:												
Bothwell-----	0-9	16-22	1.20-1.35	0.60-2.00	0.19-0.21	3.0-5.9	3.0-4.0	.37	.37	5	5	56
	9-20	22-35	1.30-1.40	0.60-2.00	0.19-0.21	3.0-5.9	1.0-3.0	.43	.43			
	20-45	28-35	1.35-1.45	0.20-0.60	0.19-0.21	3.0-5.9	0.5-2.0	.43	.43			
	45-60	18-35	1.30-1.50	0.60-2.00	0.19-0.21	3.0-5.9	0.5-1.0	.43	.43			
Hades-----	0-20	18-25	1.20-1.40	0.60-2.00	0.15-0.18	0.0-2.9	1.0-3.0	.32	.43	5	6	48
	20-42	27-35	1.30-1.40	0.20-0.60	0.19-0.21	3.0-5.9	1.0-2.0	.37	.37			
	42-60	27-35	1.30-1.40	0.20-0.60	0.16-0.18	0.0-2.9	0.5-1.0	.15	.32			
Justesen-----	0-8	12-20	1.15-1.25	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	4	6	48
	8-16	24-34	1.30-1.40	0.20-0.60	0.15-0.18	3.0-5.9	1.0-3.0	.37	.43			
	16-27	27-35	1.30-1.40	0.20-0.60	0.19-0.21	3.0-5.9	1.0-2.0	.37	.37			
	27-45	20-27	1.30-1.40	0.20-0.60	0.19-0.21	3.0-5.9	1.0-3.0	.43	.43			
	45-60	18-24	1.30-1.40	0.60-2.00	0.11-0.14	3.0-5.9	0.5-1.0	.32	.43			
14:												
Brinnum-----	0-9	18-27	1.20-1.30	0.60-2.00	0.11-0.13	3.0-5.9	0.5-1.0	.49	.49	5	4L	86
	9-31	18-27	1.20-1.40	0.20-0.60	0.08-0.10	3.0-5.9	0.5-1.0	.55	.55			
	31-60	18-35	1.25-1.45	0.20-0.60	0.08-0.10	3.0-5.9	0.0-0.5	.55	.55			
Logan-----	0-4	0-15	0.60-0.70	5.95-99.90	0.30-0.60	---	70-100	---	---	5	4L	86
	4-22	22-26	1.20-1.30	0.20-0.60	0.19-0.21	3.0-5.9	4.0-8.0	.28	.28			
	22-64	18-24	1.25-1.35	0.20-0.60	0.19-0.21	3.0-5.9	1.0-2.0	.32	.32			
Langless-----	0-3	0-15	0.60-0.70	5.95-99.90	0.30-0.60	---	70-100	---	---	5	4L	86
	3-9	12-15	1.20-1.30	0.60-2.00	0.15-0.17	0.0-2.9	3.0-5.0	.32	.32			
	9-47	15-18	1.25-1.35	0.60-2.00	0.15-0.17	0.0-2.9	1.0-3.0	.37	.37			
	47-63	15-25	1.25-1.35	0.60-2.00	0.15-0.17	0.0-2.9	0.5-1.0	.37	.37			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
15: Buckboard-----	0-15	18-24	1.30-1.40	0.60-2.00	0.16-0.18	0.0-2.9	2.0-4.0	.28	.28	5	6	48
	15-50	18-27	1.40-1.50	0.20-0.60	0.16-0.20	3.0-5.9	1.0-4.0	.32	.32			
	50-65	18-24	1.35-1.45	0.20-2.00	0.16-0.20	0.0-2.9	1.0-2.0	.32	.32			
16: Buist-----	0-15	13-18	1.35-1.55	0.60-2.00	0.12-0.15	0.0-2.9	0.5-1.0	.32	.49	2	6	48
	15-28	16-23	1.30-1.40	0.60-2.00	0.10-0.13	0.0-2.9	1.0-3.0	.32	.43			
	28-60	5-10	1.45-1.55	0.57-6.00	0.05-0.09	0.0-2.9	0.5-1.0	.05	.37			
17: Calpac-----	0-8	10-18	1.20-1.30	0.60-2.00	0.15-0.17	0.0-2.9	3.0-5.0	.24	.37	5	7	38
	8-15	10-18	1.15-1.25	0.60-2.00	0.11-0.13	0.0-2.9	2.0-4.0	.17	.43			
	15-23	18-25	1.25-1.35	0.60-2.00	0.06-0.07	3.0-5.9	1.0-3.0	.10	.37			
	23-60	18-25	1.25-1.35	0.60-2.00	0.05-0.07	3.0-5.9	1.0-2.0	.10	.37			
Ridgecrest-----	0-9	12-17	1.20-1.30	0.60-2.00	0.10-0.13	0.0-2.9	2.0-4.0	.20	.37	2	6	48
	9-13	12-17	1.20-1.30	0.60-2.00	0.13-0.17	0.0-2.9	2.0-4.0	.24	.37			
	13-31	12-17	1.30-1.40	0.60-2.00	0.08-0.11	0.0-2.9	1.0-3.0	.17	.43			
	31-35	8-16	1.50-1.60	2.00-6.00	0.03-0.05	0.0-2.9	0.5-1.0	.10	.32			
	35-45	---	---	0.00-0.14	---	---	---	---	---			
Ireland-----	0-8	10-16	1.30-1.50	0.60-2.00	0.09-0.11	0.0-2.9	2.0-4.0	.15	.43	2	8	0
	8-28	16-22	1.40-1.65	0.60-2.00	0.05-0.07	0.0-2.9	1.0-3.0	.15	.37			
	28-38	---	---	0.00-0.14	---	---	---	---	---			
18: Cedarhill-----	0-7	15-27	1.20-1.35	0.57-1.98	0.10-0.12	0.0-2.9	2.0-3.0	.20	.37	5	7	38
	7-12	18-24	1.30-1.40	0.60-2.00	0.11-0.14	3.0-5.9	0.5-1.0	.32	.43			
	12-27	10-17	1.30-1.40	0.60-2.00	0.10-0.13	0.0-2.9	1.0-2.0	.17	.43			
	27-60	2-18	1.20-2.00	0.57-5.95	0.03-0.08	0.0-3.0	1.0-2.0	.15	.24			
19: Cedarhill-----	0-7	15-27	1.20-1.35	0.57-1.98	0.10-0.12	0.0-2.9	2.0-3.0	.20	.37	5	6	48
	7-12	18-24	1.30-1.40	0.60-2.00	0.11-0.14	3.0-5.9	0.5-1.0	.32	.43			
	12-27	10-17	1.30-1.40	0.60-2.00	0.10-0.13	0.0-2.9	1.0-2.0	.17	.43			
	27-60	2-18	1.20-2.00	0.57-5.95	0.03-0.08	0.0-3.0	1.0-2.0	.15	.24			
20: Cedarhill-----	0-7	15-27	1.20-1.35	0.57-1.98	0.10-0.12	0.0-2.9	2.0-3.0	.20	.37	5	7	38
	7-12	18-24	1.30-1.40	0.60-2.00	0.11-0.14	3.0-5.9	0.5-1.0	.32	.43			
	12-27	10-17	1.30-1.40	0.60-2.00	0.10-0.13	0.0-2.9	1.0-2.0	.17	.43			
	27-60	2-18	1.20-2.00	0.57-5.95	0.03-0.08	0.0-3.0	1.0-2.0	.15	.24			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
20:												
Hymas-----	0-2	10-15	1.25-1.35	0.60-2.00	0.13-0.16	0.0-2.9	2.0-3.0	.15	.43	1	8	0
	2-7	10-18	1.35-1.45	0.60-2.00	0.09-0.12	0.0-2.9	1.0-2.0	.17	.43			
	7-11	10-18	1.35-1.45	0.60-2.00	0.07-0.11	0.0-2.9	0.5-1.0	.10	.43			
	11-21	---	---	0.00-0.14	---	---	---	---	---			
21:												
Cedarhill-----	0-7	15-27	1.20-1.35	0.57-1.98	0.10-0.12	0.0-2.9	2.0-3.0	.20	.37	5	6	48
	7-12	18-24	1.30-1.40	0.60-2.00	0.11-0.14	3.0-5.9	0.5-1.0	.32	.43			
	12-27	10-17	1.30-1.40	0.60-2.00	0.10-0.13	0.0-2.9	1.0-2.0	.17	.43			
	27-60	2-18	1.20-2.00	0.57-5.95	0.03-0.08	0.0-3.0	1.0-2.0	.15	.24			
Lostine-----	0-7	10-18	1.10-1.30	0.60-2.00	0.19-0.21	0.0-2.9	3.0-4.0	.43	.43	4	5	56
	7-45	10-18	1.10-1.30	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49			
	45-60	10-28	1.10-1.30	2.00-6.00	0.07-0.21	0.0-2.9	0.5-1.0	.28	.37			
22:												
Collinston-----	0-12	18-22	1.20-1.30	0.20-0.60	0.19-0.21	3.0-5.9	1.0-4.0	.43	.43	5	4L	86
	12-20	18-30	1.20-1.30	0.20-0.60	0.19-0.21	3.0-5.9	1.0-3.0	.43	.43			
	20-60	18-30	1.20-1.30	0.20-0.60	0.19-0.21	3.0-5.9	0.5-1.0	.43	.43			
23:												
Collinston-----	0-12	18-22	1.20-1.30	0.20-0.60	0.19-0.21	3.0-5.9	1.0-4.0	.43	.43	5	4L	86
	12-20	18-30	1.20-1.30	0.20-0.60	0.19-0.21	3.0-5.9	1.0-3.0	.43	.43			
	20-60	18-30	1.20-1.30	0.20-0.60	0.19-0.21	3.0-5.9	0.5-1.0	.43	.43			
Kearns-----	0-8	16-24	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.32	.32	5	5	56
	8-32	18-26	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	1.0-3.0	.32	.32			
	32-67	15-19	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.43	.43			
24:												
Copenhagen-----	0-6	18-24	0.80-1.00	0.60-2.00	0.06-0.08	0.0-2.9	1.0-2.0	.10	.37	1	8	0
	6-14	18-24	1.20-1.40	0.60-2.00	0.10-0.13	0.0-2.9	0.5-2.0	.10	.37			
	14-24	---	---	0.00-0.01	---	---	---	---	---			
Lonigan-----	0-11	5-18	0.95-1.05	2.00-6.00	0.19-0.20	0.0-2.9	1.0-2.0	.32	.43	3	3	86
	11-16	10-18	1.00-1.10	2.00-6.00	0.14-0.16	0.0-2.9	0.5-1.0	.24	.37			
	16-33	10-22	1.30-1.40	2.00-6.00	0.08-0.10	0.0-2.9	0.5-1.0	.24	.37			
	33-43	---	---	0.00-0.01	---	---	---	---	---			
Manila-----	0-5	18-27	1.20-1.30	0.60-2.00	0.16-0.18	3.0-5.9	2.0-4.0	.43	.43	5	6	48
	5-19	35-40	1.35-1.45	0.06-0.20	0.17-0.19	6.0-8.9	1.0-3.0	.37	.37			
	19-45	35-55	1.35-1.45	0.06-0.20	0.17-0.19	6.0-8.9	1.0-3.0	.37	.37			
	45-60	12-18	1.20-1.30	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.49	.49			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
25:												
Darkbull-----	0-10	7-12	1.30-1.40	0.60-2.00	0.12-0.15	0.0-2.9	1.0-2.0	.32	.37	3	5	56
	10-43	7-15	1.30-1.40	0.60-2.00	0.12-0.15	0.0-2.9	1.0-2.0	.32	.37			
	43-60	6-15	1.30-1.40	6.00-20.00	0.04-0.08	0.0-2.9	0.5-1.0	.15	.24			
Pyrat-----	0-14	12-18	1.20-1.30	0.60-2.00	0.16-0.20	0.0-2.9	1.0-2.0	.24	.49	3	5	56
	14-25	12-18	1.20-1.30	0.60-2.00	0.16-0.20	0.0-2.9	1.0-2.0	.20	.49			
	25-33	8-15	1.30-1.40	2.00-6.00	0.04-0.07	0.0-2.9	0.5-1.0	.10	.37			
	33-43	8-15	1.30-1.40	2.00-6.00	0.04-0.07	0.0-2.9	0.5-1.0	.10	.37			
	43-65	2-8	1.40-1.50	20.00-20.00	0.01-0.04	0.0-2.9	0.0-0.5	.05	.20			
Ecur-----	0-15	10-17	1.20-1.40	2.00-6.00	0.12-0.15	0.0-2.9	0.5-1.0	.28	.32	5	3	86
	15-37	10-17	1.20-1.40	2.00-6.00	0.12-0.17	0.0-2.9	0.5-1.0	.28	.32			
	37-44	0-5	1.45-1.60	6.00-20.00	0.04-0.06	0.0-2.9	0.5-1.0	.10	.10			
	44-49	4-8	1.40-1.60	6.00-20.00	0.07-0.10	0.0-2.9	0.0-0.5	.17	.24			
	49-60	0-5	1.45-1.60	6.00-20.00	0.04-0.06	0.0-2.9	0.5-1.0	.10	.10			
26:												
DeJarnet-----	0-3	18-25	1.20-1.30	0.60-2.00	0.12-0.16	3.0-5.9	2.0-4.0	.24	.37	5	6	48
	3-27	18-25	1.30-1.40	0.60-2.00	0.10-0.15	3.0-5.9	1.0-3.0	.28	.37			
	27-41	18-32	1.40-1.50	0.60-2.00	0.07-0.11	3.0-5.9	0.5-1.0	.20	.37			
	41-62	10-15	1.50-1.60	2.00-6.00	0.02-0.05	3.0-5.9	0.5-1.0	.10	.20			
27:												
Dumps, mine-----	---	---	---	---	---	---	---	---	---	-	---	---
28:												
Ecur-----	0-15	10-17	1.20-1.40	2.00-6.00	0.12-0.15	0.0-2.9	0.5-1.0	.28	.32	5	3	86
	15-37	10-17	1.20-1.40	2.00-6.00	0.12-0.17	0.0-2.9	0.5-1.0	.28	.32			
	37-44	0-5	1.45-1.60	6.00-20.00	0.04-0.06	0.0-2.9	0.5-1.0	.10	.10			
	44-49	4-8	1.40-1.60	6.00-20.00	0.07-0.10	0.0-2.9	0.0-0.5	.17	.24			
	49-60	0-5	1.45-1.60	6.00-20.00	0.04-0.06	0.0-2.9	0.5-1.0	.10	.10			
29:												
Ecur-----	0-15	10-17	1.20-1.40	2.00-6.00	0.12-0.15	0.0-2.9	0.5-1.0	.28	.32	5	3	86
	15-37	10-17	1.20-1.40	2.00-6.00	0.12-0.17	0.0-2.9	0.5-1.0	.28	.32			
	37-44	0-5	1.45-1.60	6.00-20.00	0.04-0.06	0.0-2.9	0.5-1.0	.10	.10			
	44-49	4-8	1.40-1.60	6.00-20.00	0.07-0.10	0.0-2.9	0.0-0.5	.17	.24			
	49-60	0-5	1.45-1.60	6.00-20.00	0.04-0.06	0.0-2.9	0.5-1.0	.10	.10			
Darkbull-----	0-10	7-12	1.30-1.40	0.60-2.00	0.12-0.15	0.0-2.9	1.0-2.0	.32	.37	3	5	56
	10-43	7-15	1.30-1.40	0.60-2.00	0.12-0.15	0.0-2.9	1.0-2.0	.32	.37			
	43-60	6-15	1.30-1.40	6.00-20.00	0.04-0.08	0.0-2.9	0.5-1.0	.15	.24			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
30: Elevator-----	0-10	18-26	1.20-1.35	0.20-0.60	0.17-0.19	3.0-5.9	2.0-4.0	.43	.43	5	6	48
	10-32	28-35	1.40-1.55	0.06-0.20	0.17-0.19	3.0-5.9	1.0-3.0	.43	.43			
	32-60	28-35	1.35-1.45	0.06-0.60	0.17-0.19	3.0-5.9	0.5-1.0	.43	.43			
31: Elevator-----	0-10	18-26	1.20-1.35	0.20-0.60	0.17-0.19	3.0-5.9	2.0-4.0	.43	.43	5	6	48
	10-32	28-35	1.40-1.55	0.06-0.20	0.17-0.19	3.0-5.9	1.0-3.0	.43	.43			
	32-60	28-35	1.35-1.45	0.06-0.60	0.17-0.19	3.0-5.9	0.5-1.0	.43	.43			
Jensen-----	0-12	14-22	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.37	.37	5	5	56
	12-45	18-25	1.20-1.40	0.60-2.00	0.15-0.18	3.0-5.9	1.0-2.0	.28	.43			
	45-60	14-22	1.30-1.40	0.60-2.00	0.05-0.10	0.0-2.9	0.5-1.0	.17	.49			
32: Elevator-----	0-10	18-26	1.20-1.35	0.20-0.60	0.17-0.19	3.0-5.9	2.0-4.0	.43	.43	5	6	48
	10-32	28-35	1.40-1.55	0.06-0.20	0.17-0.19	3.0-5.9	1.0-3.0	.43	.43			
	32-60	28-35	1.35-1.45	0.06-0.60	0.17-0.19	3.0-5.9	0.5-1.0	.43	.43			
Jensen-----	0-12	14-22	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.37	.37	5	5	56
	12-45	18-25	1.20-1.40	0.60-2.00	0.15-0.18	3.0-5.9	1.0-2.0	.28	.43			
	45-60	14-22	1.30-1.40	0.60-2.00	0.05-0.10	0.0-2.9	0.5-1.0	.17	.49			
33: Fridlo-----	0-7	20-26	1.20-1.30	0.20-0.60	0.19-0.21	3.0-5.9	3.0-5.0	.28	.28	3	4L	86
	7-24	27-34	1.30-1.40	0.06-0.20	0.19-0.21	3.0-5.9	2.0-4.0	.32	.32			
	24-39	27-32	1.30-1.40	0.06-0.20	0.19-0.21	3.0-5.9	1.0-3.0	.32	.32			
	39-60	20-26	1.20-1.30	0.20-0.60	0.19-0.21	3.0-5.9	0.5-1.0	.37	.37			
34: Goosenawt-----	0-24	15-20	1.40-1.50	0.60-2.00	0.11-0.14	0.0-2.9	1.0-4.0	.28	.37	5	6	48
	24-58	27-33	1.30-1.40	0.20-0.60	0.17-0.21	3.0-5.9	1.0-3.0	.32	.32			
	58-64	15-26	1.20-1.30	0.60-2.00	0.16-0.20	3.0-5.9	1.0-3.0	.37	.37			
	64-74	15-26	1.20-1.30	0.60-2.00	0.16-0.20	3.0-5.9	1.0-3.0	.37	.37			
35: Hans-----	0-10	19-24	1.25-1.35	0.20-0.60	0.19-0.21	3.0-5.9	1.0-3.0	.32	.32	5	5	56
	10-26	28-34	1.30-1.40	0.06-0.20	0.19-0.21	3.0-5.9	1.0-3.0	.32	.32			
	26-60	27-31	1.30-1.40	0.06-0.20	0.19-0.21	3.0-5.9	0.5-2.0	.37	.37			
36: Highcreek-----	0-7	16-25	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	2.0-4.0	.37	.37	5	5	56
	7-26	18-27	1.30-1.40	0.60-2.00	0.15-0.20	3.0-5.9	1.0-3.0	.28	.37			
	26-66	18-27	1.30-1.40	0.60-2.00	0.14-0.15	3.0-5.9	1.0-3.0	.28	.43			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
36:												
Sterling-----	0-13	10-20	1.30-1.40	0.60-2.00	0.08-0.11	0.0-2.9	2.0-4.0	.15	.37	5	6	48
	13-66	10-22	1.30-1.40	0.60-2.00	0.05-0.11	0.0-2.9	0.5-3.0	.10	.37			
37:												
Highcreek-----	0-7	16-25	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	2.0-4.0	.37	.37	5	5	56
	7-26	18-27	1.30-1.40	0.60-2.00	0.15-0.20	3.0-5.9	1.0-3.0	.28	.37			
	26-66	18-27	1.30-1.40	0.60-2.00	0.14-0.15	3.0-5.9	1.0-3.0	.28	.43			
Sterling-----	0-13	10-20	1.30-1.40	0.60-2.00	0.08-0.11	0.0-2.9	2.0-4.0	.15	.37	5	6	48
	13-66	10-22	1.30-1.40	0.60-2.00	0.05-0.11	0.0-2.9	0.5-3.0	.10	.37			
38:												
Hillfield-----	0-7	10-16	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	1.0-2.0	.43	.43	5	4L	86
	7-16	10-18	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	1.0-2.0	.43	.43			
	16-60	10-17	1.20-1.30	0.60-2.00	0.14-0.21	0.0-2.9	0.0-0.5	.49	.49			
Kucera-----	0-22	10-18	1.40-1.50	0.60-2.00	0.19-0.21	0.0-2.9	2.0-5.0	.43	.43	5	5	56
	22-42	10-18	1.40-1.55	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49			
	42-60	10-18	1.40-1.55	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
39:												
Hillfield-----	0-7	10-16	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	1.0-2.0	.43	.43	5	4L	86
	7-16	10-18	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	1.0-2.0	.43	.43			
	16-60	10-17	1.20-1.30	0.60-2.00	0.14-0.21	0.0-2.9	0.0-0.5	.49	.49			
Kucera-----	0-22	10-18	1.40-1.50	0.60-2.00	0.19-0.21	0.0-2.9	2.0-5.0	.43	.43	5	5	56
	22-42	10-18	1.40-1.55	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49			
	42-60	10-18	1.40-1.55	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
40:												
Hondoho-----	0-14	12-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	2.0-3.0	.20	.37	3	6	48
	14-28	15-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	1.0-3.0	.20	.37			
	28-60	5-19	1.35-1.50	2.00-6.00	0.04-0.07	0.0-2.9	0.0-1.0	.05	.28			
Calpac-----	0-8	10-18	1.20-1.30	0.60-2.00	0.15-0.17	0.0-2.9	3.0-5.0	.24	.37	5	7	38
	8-15	10-18	1.15-1.25	0.60-2.00	0.11-0.13	0.0-2.9	2.0-4.0	.17	.43			
	15-23	18-25	1.25-1.35	0.60-2.00	0.06-0.07	3.0-5.9	1.0-3.0	.10	.37			
	23-60	18-25	1.25-1.35	0.60-2.00	0.05-0.07	3.0-5.9	1.0-2.0	.10	.37			
Lizdale-----	0-7	10-18	1.15-1.25	0.60-2.00	0.11-0.13	0.0-2.9	2.0-4.0	.17	.49	2	6	48
	7-10	10-18	1.25-1.35	2.00-6.00	0.08-0.10	0.0-2.9	1.0-3.0	.05	.15			
	10-36	10-15	1.45-1.55	6.00-20.00	0.05-0.07	0.0-2.9	1.0-3.0	.15	.20			
	36-52	3-25	1.40-1.50	1.98-5.95	0.10-0.14	0.0-2.9	0.0-0.5	.20	.20			
	52-60	3-10	1.15-1.30	2.00-20.00	0.03-0.05	0.0-2.9	0.0-0.5	.05	.28			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
41:												
Hondoho-----	0-14	12-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	2.0-3.0	.20	.37	3	6	48
	14-28	15-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	1.0-3.0	.20	.37			
	28-60	5-19	1.35-1.50	2.00-6.00	0.04-0.07	0.0-2.9	0.0-1.0	.05	.28			
Hymas-----	0-2	10-15	1.25-1.35	0.60-2.00	0.13-0.16	0.0-2.9	2.0-3.0	.15	.43	1	8	0
	2-7	10-18	1.35-1.45	0.60-2.00	0.09-0.12	0.0-2.9	1.0-2.0	.17	.43			
	7-11	10-18	1.35-1.45	0.60-2.00	0.07-0.11	0.0-2.9	0.5-1.0	.10	.43			
	11-21	---	---	0.00-0.14	---	---	---	---	---			
Pavohroo-----	0-1	0-2	0.50-0.60	5.95-99.90	0.30-0.60	---	70-100	---	---	5	5	56
	1-7	10-18	1.10-1.20	0.60-2.00	0.15-0.17	0.0-2.9	3.0-8.0	.24	.37			
	7-16	16-26	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	2.0-4.0	.37	.43			
	16-39	10-18	1.10-1.20	0.60-2.00	0.15-0.17	0.0-2.9	3.0-8.0	.24	.37			
	39-61	27-33	1.30-1.40	0.20-0.60	0.13-0.16	3.0-5.9	0.5-3.0	.20	.37			
42:												
Hondoho-----	0-14	12-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	2.0-3.0	.20	.37	3	6	48
	14-28	15-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	1.0-3.0	.20	.37			
	28-60	5-19	1.35-1.50	2.00-6.00	0.04-0.07	0.0-2.9	0.0-1.0	.05	.28			
Hymas-----	0-2	10-15	1.25-1.35	0.60-2.00	0.13-0.16	0.0-2.9	2.0-3.0	.15	.43	1	8	0
	2-7	10-18	1.35-1.45	0.60-2.00	0.09-0.12	0.0-2.9	1.0-2.0	.17	.43			
	7-11	10-18	1.35-1.45	0.60-2.00	0.07-0.11	0.0-2.9	0.5-1.0	.10	.43			
	11-21	---	---	0.00-0.14	---	---	---	---	---			
Pavohroo-----	0-1	0-2	0.50-0.60	5.95-99.90	0.30-0.60	---	70-100	---	---	5	5	56
	1-7	10-18	1.10-1.20	0.60-2.00	0.15-0.17	0.0-2.9	3.0-8.0	.24	.37			
	7-16	16-26	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	2.0-4.0	.37	.43			
	16-39	10-18	1.10-1.20	0.60-2.00	0.15-0.17	0.0-2.9	3.0-8.0	.24	.37			
	39-61	27-33	1.30-1.40	0.20-0.60	0.13-0.16	3.0-5.9	0.5-3.0	.20	.37			
43:												
Hondoho-----	0-14	12-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	2.0-3.0	.20	.37	3	6	48
	14-28	15-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	1.0-3.0	.20	.37			
	28-60	5-19	1.35-1.50	2.00-6.00	0.04-0.07	0.0-2.9	0.0-1.0	.05	.28			
Ridgecrest-----	0-9	12-17	1.20-1.30	0.60-2.00	0.10-0.13	0.0-2.9	2.0-4.0	.20	.37	2	6	48
	9-13	12-17	1.20-1.30	0.60-2.00	0.13-0.17	0.0-2.9	2.0-4.0	.24	.37			
	13-31	12-17	1.30-1.40	0.60-2.00	0.08-0.11	0.0-2.9	1.0-3.0	.17	.43			
	31-35	8-16	1.50-1.60	2.00-6.00	0.03-0.05	0.0-2.9	0.5-1.0	.10	.32			
	35-45	---	---	0.00-0.14	---	---	---	---	---			
Hades-----	0-20	18-25	1.20-1.40	0.60-2.00	0.15-0.18	0.0-2.9	1.0-3.0	.32	.43	5	6	48
	20-42	27-35	1.30-1.40	0.20-0.60	0.19-0.21	3.0-5.9	1.0-2.0	.37	.37			
	42-60	27-35	1.30-1.40	0.20-0.60	0.16-0.18	0.0-2.9	0.5-1.0	.15	.32			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
44:												
Hutchley-----	0-6	15-25	1.15-1.30	0.60-2.00	0.12-0.16	0.0-2.9	1.0-2.0	.20	.37	1	6	48
	6-13	27-35	1.35-1.50	0.20-0.60	0.09-0.12	3.0-5.9	0.5-2.0	.15	.32			
	13-23	---	---	0.00-0.01	---	---	---	---	---			
McCarey-----	0-8	18-22	1.20-1.30	0.20-0.60	0.19-0.21	3.0-5.9	2.0-4.0	.37	.37	2	6	48
	8-15	23-27	1.20-1.30	0.20-0.60	0.19-0.21	3.0-5.9	2.0-4.0	.32	.37			
	15-19	23-27	1.20-1.30	0.20-0.60	0.19-0.21	3.0-5.9	1.0-3.0	.24	.32			
	19-23	18-27	1.25-1.35	0.20-0.60	0.14-0.17	3.0-5.9	1.0-3.0	.24	.32			
	23-33	---	---	0.00-0.01	---	---	---	---	---			
Araveton-----	0-8	16-26	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	2.0-4.0	.37	.43	5	6	48
	8-36	18-26	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	1.0-3.0	.32	.43			
	36-62	18-24	1.30-1.40	0.60-2.00	0.11-0.14	3.0-5.9	0.5-1.0	.32	.43			
45:												
Hymas-----	0-2	10-15	1.25-1.35	0.60-2.00	0.13-0.16	0.0-2.9	2.0-3.0	.15	.43	1	8	0
	2-7	10-18	1.35-1.45	0.60-2.00	0.09-0.12	0.0-2.9	1.0-2.0	.17	.43			
	7-11	10-18	1.35-1.45	0.60-2.00	0.07-0.11	0.0-2.9	0.5-1.0	.10	.43			
	11-21	---	---	0.00-0.14	---	---	---	---	---			
Calpac-----	0-8	10-18	1.20-1.30	0.60-2.00	0.15-0.17	0.0-2.9	3.0-5.0	.24	.37	5	7	38
	8-15	10-18	1.15-1.25	0.60-2.00	0.11-0.13	0.0-2.9	2.0-4.0	.17	.43			
	15-23	18-25	1.25-1.35	0.60-2.00	0.06-0.07	3.0-5.9	1.0-3.0	.10	.37			
	23-60	18-25	1.25-1.35	0.60-2.00	0.05-0.07	3.0-5.9	1.0-2.0	.10	.37			
Ireland-----	0-8	10-16	1.30-1.50	0.60-2.00	0.09-0.11	0.0-2.9	2.0-4.0	.15	.43	2	8	0
	8-28	16-22	1.40-1.65	0.60-2.00	0.05-0.07	0.0-2.9	1.0-3.0	.15	.37			
	28-38	---	---	0.00-0.14	---	---	---	---	---			
46:												
Hymas-----	0-2	10-15	1.25-1.35	0.60-2.00	0.13-0.16	0.0-2.9	2.0-3.0	.15	.43	1	8	0
	2-7	10-18	1.35-1.45	0.60-2.00	0.09-0.12	0.0-2.9	1.0-2.0	.17	.43			
	7-11	10-18	1.35-1.45	0.60-2.00	0.07-0.11	0.0-2.9	0.5-1.0	.10	.43			
	11-21	---	---	0.00-0.14	---	---	---	---	---			
Northwater-----	0-2	0-2	0.50-0.60	5.95-99.90	0.30-0.60	---	70-100	---	---	5	6	48
	2-20	15-22	1.20-1.30	0.60-2.00	0.14-0.16	0.0-2.9	2.0-4.0	.28	.37			
	20-31	15-22	1.20-1.30	0.60-2.00	0.12-0.15	0.0-2.9	1.0-3.0	.24	.43			
	31-37	18-32	1.25-1.35	0.60-2.00	0.09-0.12	3.0-5.9	0.5-1.0	.20	.37			
	37-62	18-32	1.25-1.35	0.60-2.00	0.09-0.12	3.0-5.9	0.5-1.0	.20	.32			
Clayburn-----	0-4	10-20	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.28	5	5	56
	4-21	10-20	1.20-1.30	0.60-2.00	0.16-0.18	0.0-2.9	1.0-3.0	.37	.28			
	21-39	27-33	1.40-1.50	0.60-2.00	0.15-0.17	3.0-5.9	1.0-2.0	.24	.28			
	39-60	27-33	1.40-1.50	0.60-2.00	0.14-0.16	3.0-5.9	1.0-2.0	.24	.28			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
47:												
Hymas-----	0-2	10-15	1.25-1.35	0.60-2.00	0.13-0.16	0.0-2.9	2.0-3.0	.15	.43	1	8	0
	2-7	10-18	1.35-1.45	0.60-2.00	0.09-0.12	0.0-2.9	1.0-2.0	.17	.43			
	7-11	10-18	1.35-1.45	0.60-2.00	0.07-0.11	0.0-2.9	0.5-1.0	.10	.43			
	11-21	---	---	0.00-0.14	---	---	---	---	---			
Povey-----	0-5	8-18	1.30-1.45	0.60-2.00	0.12-0.14	0.0-2.9	4.0-10	.20	.32	5	7	38
	5-12	10-20	1.30-1.45	0.60-2.00	0.06-0.11	0.0-2.9	2.0-6.0	.15	.32			
	12-20	15-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	1.0-3.0	.20	.37			
	20-35	8-18	1.30-1.45	0.60-2.00	0.06-0.08	0.0-2.9	0.5-2.0	.15	.32			
	35-60	8-18	1.10-1.65	2.00-6.00	0.03-0.21	0.0-2.9	1.0-2.0	.20	.28			
48:												
Hymas-----	0-2	10-15	1.25-1.35	0.60-2.00	0.13-0.16	0.0-2.9	2.0-3.0	.15	.43	1	8	0
	2-7	10-18	1.35-1.45	0.60-2.00	0.09-0.12	0.0-2.9	1.0-2.0	.17	.43			
	7-11	10-18	1.35-1.45	0.60-2.00	0.07-0.11	0.0-2.9	0.5-1.0	.10	.43			
	11-21	---	---	0.00-0.14	---	---	---	---	---			
Povey-----	0-5	8-18	1.30-1.45	0.60-2.00	0.12-0.14	0.0-2.9	4.0-10	.20	.32	5	7	38
	5-12	10-20	1.30-1.45	0.60-2.00	0.06-0.11	0.0-2.9	2.0-6.0	.15	.32			
	12-20	15-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	1.0-3.0	.20	.37			
	20-35	8-18	1.30-1.45	0.60-2.00	0.06-0.08	0.0-2.9	0.5-2.0	.15	.32			
	35-60	8-18	1.10-1.65	2.00-6.00	0.03-0.21	0.0-2.9	1.0-2.0	.20	.28			
Pavohroo-----	0-1	0-2	0.50-0.60	5.95-99.90	0.30-0.60	---	70-100	---	---	5	5	56
	1-7	10-18	1.10-1.20	0.60-2.00	0.15-0.17	0.0-2.9	3.0-8.0	.24	.37			
	7-16	16-26	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	2.0-4.0	.37	.43			
	16-39	10-18	1.10-1.20	0.60-2.00	0.15-0.17	0.0-2.9	3.0-8.0	.24	.37			
	39-61	27-33	1.30-1.40	0.20-0.60	0.13-0.16	3.0-5.9	0.5-3.0	.20	.37			
49:												
Inkom-----	0-6	12-20	1.20-1.30	0.60-2.00	0.19-0.22	0.0-2.9	3.0-6.0	.37	.37	5	4L	86
	6-32	18-27	1.25-1.35	0.60-2.00	0.18-0.21	3.0-5.9	2.0-4.0	.43	.43			
	32-60	18-27	1.25-1.35	0.60-2.00	0.18-0.21	3.0-5.9	2.0-4.0	.43	.43			
50:												
Iphil-----	0-10	7-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.43	.43	5	4L	86
	10-36	10-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-2.0	.49	.49			
	36-60	12-18	1.20-1.30	0.60-2.00	0.18-0.21	0.0-2.9	0.5-1.0	.49	.49			
Ririe-----	0-14	15-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	5	5	56
	14-63	12-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
Watercanyon-----	0-5	10-18	1.15-1.25	0.60-2.00	0.16-0.20	0.0-2.9	1.0-2.0	.49	.49	5	5	56
	5-33	5-16	1.20-1.40	0.60-2.00	0.14-0.18	0.0-2.9	0.5-1.0	.55	.55			
	33-62	5-16	1.20-1.40	0.60-2.00	0.14-0.18	0.0-2.9	0.5-1.0	.55	.55			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
51:												
Ireland-----	0-8	10-16	1.30-1.50	0.60-2.00	0.09-0.11	0.0-2.9	2.0-4.0	.15	.43	2	8	0
	8-28	16-22	1.40-1.65	0.60-2.00	0.05-0.07	0.0-2.9	1.0-3.0	.15	.37			
	28-38	---	---	0.00-0.14	---	---	---	---	---			
Calpac-----	0-8	10-18	1.20-1.30	0.60-2.00	0.15-0.17	0.0-2.9	3.0-5.0	.24	.37	5	7	38
	8-15	10-18	1.15-1.25	0.60-2.00	0.11-0.13	0.0-2.9	2.0-4.0	.17	.43			
	15-23	18-25	1.25-1.35	0.60-2.00	0.06-0.07	3.0-5.9	1.0-3.0	.10	.37			
	23-60	18-25	1.25-1.35	0.60-2.00	0.05-0.07	3.0-5.9	1.0-2.0	.10	.37			
52:												
Jensen-----	0-12	14-22	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.37	.37	5	6	48
	12-45	18-25	1.20-1.40	0.60-2.00	0.15-0.18	3.0-5.9	1.0-2.0	.28	.43			
	45-60	14-22	1.30-1.40	0.60-2.00	0.05-0.10	0.0-2.9	0.5-1.0	.17	.49			
53:												
Jensen-----	0-12	14-22	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.37	.37	5	6	48
	12-45	18-25	1.20-1.40	0.60-2.00	0.15-0.18	3.0-5.9	1.0-2.0	.28	.43			
	45-60	14-22	1.30-1.40	0.60-2.00	0.05-0.10	0.0-2.9	0.5-1.0	.17	.49			
54:												
Jensen-----	0-12	14-22	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.37	.37	5	6	48
	12-45	18-25	1.20-1.40	0.60-2.00	0.15-0.18	3.0-5.9	1.0-2.0	.28	.43			
	45-60	14-22	1.30-1.40	0.60-2.00	0.05-0.10	0.0-2.9	0.5-1.0	.17	.49			
Iphil-----	0-10	7-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.43	.43	5	4L	86
	10-36	10-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-2.0	.49	.49			
	36-60	12-18	1.20-1.30	0.60-2.00	0.18-0.21	0.0-2.9	0.5-1.0	.49	.49			
Wursten-----	0-14	13-18	1.20-1.45	0.60-2.00	0.13-0.17	0.0-2.9	1.0-2.0	.32	.43	5	4L	86
	14-60	13-18	1.30-1.40	0.60-2.00	0.11-0.16	0.0-2.9	0.0-1.0	.28	.49			
55:												
Jovine-----	0-7	15-18	1.30-1.40	0.60-2.00	0.19-0.21	0.0-2.9	2.0-5.0	.37	.37	5	5	56
	7-60	15-18	1.30-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-4.0	.32	.32			
56:												
Justesen-----	0-8	12-20	1.15-1.25	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	4	6	48
	8-16	24-34	1.30-1.40	0.20-0.60	0.15-0.18	3.0-5.9	1.0-3.0	.37	.43			
	16-27	27-35	1.30-1.40	0.20-0.60	0.19-0.21	3.0-5.9	1.0-2.0	.37	.37			
	27-45	20-27	1.30-1.40	0.20-0.60	0.19-0.21	3.0-5.9	1.0-3.0	.43	.43			
	45-60	18-24	1.30-1.40	0.60-2.00	0.11-0.14	3.0-5.9	0.5-1.0	.32	.43			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
57:												
Justesen-----	0-8	12-20	1.15-1.25	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	4	6	48
	8-16	24-34	1.30-1.40	0.20-0.60	0.15-0.18	3.0-5.9	1.0-3.0	.37	.43			
	16-27	27-35	1.30-1.40	0.20-0.60	0.19-0.21	3.0-5.9	1.0-2.0	.37	.37			
	27-45	20-27	1.30-1.40	0.20-0.60	0.19-0.21	3.0-5.9	1.0-3.0	.43	.43			
	45-60	18-24	1.30-1.40	0.60-2.00	0.11-0.14	3.0-5.9	0.5-1.0	.32	.43			
58:												
Justesen-----	0-8	12-20	1.15-1.25	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	4	5	56
	8-16	24-34	1.30-1.40	0.20-0.60	0.15-0.18	3.0-5.9	1.0-3.0	.37	.43			
	16-27	27-35	1.30-1.40	0.20-0.60	0.19-0.21	3.0-5.9	1.0-2.0	.37	.37			
	27-45	20-27	1.30-1.40	0.20-0.60	0.19-0.21	3.0-5.9	1.0-3.0	.43	.43			
	45-60	18-24	1.30-1.40	0.60-2.00	0.11-0.14	3.0-5.9	0.5-1.0	.32	.43			
Ririe-----	0-14	15-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	5	5	56
	14-63	12-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
Buist-----	0-15	13-18	1.35-1.55	0.60-2.00	0.12-0.15	0.0-2.9	0.5-1.0	.32	.49	2	6	48
	15-28	16-23	1.30-1.40	0.60-2.00	0.10-0.13	0.0-2.9	1.0-3.0	.32	.43			
	28-60	5-10	1.45-1.55	0.57-6.00	0.05-0.09	0.0-2.9	0.5-1.0	.05	.37			
59:												
Kearns-----	0-8	16-24	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.32	.32	5	5	56
	8-32	18-26	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	1.0-3.0	.32	.32			
	32-67	15-19	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.43	.43			
60:												
Kearns-----	0-8	16-24	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.32	.32	5	5	56
	8-32	18-26	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	1.0-3.0	.32	.32			
	32-67	15-19	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.43	.43			
61:												
Kidman-----	0-17	8-18	1.30-1.50	2.00-6.00	0.10-0.12	0.0-2.9	1.0-3.0	.17	.17	5	3	86
	17-38	8-18	1.30-1.50	2.00-6.00	0.10-0.12	0.0-2.9	1.0-3.0	.24	.24			
	38-66	8-18	1.30-1.50	2.00-6.00	0.10-0.12	0.0-2.9	0.5-1.0	.32	.32			
62:												
Kidman-----	0-17	8-18	1.30-1.50	2.00-6.00	0.10-0.12	0.0-2.9	1.0-3.0	.17	.17	5	3	86
	17-38	8-18	1.30-1.50	2.00-6.00	0.10-0.12	0.0-2.9	1.0-3.0	.24	.24			
	38-66	8-18	1.30-1.50	2.00-6.00	0.10-0.12	0.0-2.9	0.5-1.0	.32	.32			
Preston-----	0-3	1-5	1.45-1.60	6.00-20.00	0.05-0.07	0.0-2.9	1.0-2.0	.15	.15	5	1	250
	3-65	0-5	1.45-1.60	6.00-20.00	0.04-0.06	0.0-2.9	0.5-1.0	.10	.10			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
63: Kucera-----	0-22	10-18	1.40-1.50	0.60-2.00	0.19-0.21	0.0-2.9	2.0-5.0	.43	.43	5	5	56
	22-42	10-18	1.40-1.55	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49			
	42-60	10-18	1.40-1.55	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
64: Lagonot-----	0-10	16-24	1.20-1.40	0.60-2.00	0.19-0.21	3.0-5.9	2.0-4.0	.37	.37	5	4L	86
	10-60	18-24	1.20-1.40	0.60-2.00	0.19-0.21	3.0-5.9	0.5-2.0	.37	.37			
65: Langless-----	0-3	0-15	0.60-0.70	5.95-99.90	0.30-0.60	---	70-100	---	---	5	4L	86
	3-9	12-15	1.20-1.30	0.60-2.00	0.15-0.17	0.0-2.9	3.0-5.0	.32	.32			
	9-47	15-18	1.25-1.35	0.60-2.00	0.15-0.17	0.0-2.9	1.0-3.0	.37	.37			
	47-63	15-25	1.25-1.35	0.60-2.00	0.15-0.17	0.0-2.9	0.5-1.0	.37	.37			
66: Langless-----	0-3	0-15	0.60-0.70	5.95-99.90	0.30-0.60	---	70-100	---	---	5	4L	86
	3-9	12-15	1.20-1.30	0.60-2.00	0.15-0.17	0.0-2.9	3.0-5.0	.32	.32			
	9-47	15-18	1.25-1.35	0.60-2.00	0.15-0.17	0.0-2.9	1.0-3.0	.37	.37			
	47-63	15-25	1.25-1.35	0.60-2.00	0.15-0.17	0.0-2.9	0.5-1.0	.37	.37			
Logan-----	0-4	0-15	0.60-0.70	5.95-99.90	0.30-0.60	---	70-100	---	---	5	4L	86
	4-22	22-26	1.20-1.30	0.20-0.60	0.19-0.21	3.0-5.9	4.0-8.0	.28	.28			
	22-64	18-24	1.25-1.35	0.20-0.60	0.19-0.21	3.0-5.9	1.0-2.0	.32	.32			
67: Lanoak-----	0-30	10-20	1.12-1.35	0.60-2.00	0.19-0.21	0.0-2.9	3.0-5.0	.37	.37	5	5	56
	30-49	12-20	1.12-1.35	0.60-2.00	0.19-0.21	0.0-2.9	3.0-5.0	.37	.37			
	49-60	18-27	1.25-1.55	0.60-2.00	0.19-0.21	3.0-5.9	1.0-3.0	.49	.49			
68: Lanoak-----	0-30	10-20	1.12-1.35	0.60-2.00	0.19-0.21	0.0-2.9	3.0-5.0	.37	.37	5	5	56
	30-49	12-20	1.12-1.35	0.60-2.00	0.19-0.21	0.0-2.9	3.0-5.0	.37	.37			
	49-60	18-27	1.25-1.55	0.60-2.00	0.19-0.21	3.0-5.9	1.0-3.0	.49	.49			
69: Lanoak-----	0-30	10-20	1.12-1.35	0.60-2.00	0.19-0.21	0.0-2.9	3.0-5.0	.37	.37	5	5	56
	30-49	12-20	1.12-1.35	0.60-2.00	0.19-0.21	0.0-2.9	3.0-5.0	.37	.37			
	49-60	18-27	1.25-1.55	0.60-2.00	0.19-0.21	3.0-5.9	1.0-3.0	.49	.49			
Hondoho-----	0-14	12-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	2.0-3.0	.20	.37	3	6	48
	14-28	15-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	1.0-3.0	.20	.37			
	28-60	5-19	1.20-1.40	0.60-2.00	0.08-0.11	3.0-5.9	0.0-1.0	.17	.32			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
70:												
Logan-----	0-4	0-15	0.60-0.70	5.95-99.90	0.30-0.60	---	70-100	---	---	5	4L	86
	4-22	22-26	1.20-1.30	0.20-0.60	0.19-0.21	3.0-5.9	4.0-8.0	.28	.28			
	22-64	18-24	1.25-1.35	0.20-0.60	0.19-0.21	3.0-5.9	1.0-2.0	.32	.32			
71:												
Lonigan-----	0-11	5-18	0.95-1.05	2.00-6.00	0.19-0.20	0.0-2.9	1.0-2.0	.32	.43	3	3	86
	11-16	10-18	1.00-1.10	2.00-6.00	0.14-0.16	0.0-2.9	0.5-1.0	.24	.37			
	16-33	10-22	1.30-1.40	2.00-6.00	0.08-0.10	0.0-2.9	0.5-1.0	.24	.37			
	33-43	---	---	0.00-0.01	---	---	---	---	---			
Lizdale-----	0-7	10-18	1.15-1.25	0.60-2.00	0.11-0.13	0.0-2.9	2.0-4.0	.17	.49	2	6	48
	7-10	10-18	1.25-1.35	2.00-6.00	0.08-0.10	0.0-2.9	1.0-3.0	.05	.15			
	10-36	10-15	1.45-1.55	6.00-20.00	0.05-0.07	0.0-2.9	1.0-3.0	.15	.20			
	36-52	3-25	1.40-1.50	1.98-5.95	0.10-0.14	0.0-2.9	0.0-0.5	.20	.20			
	52-60	3-10	1.15-1.30	2.00-20.00	0.03-0.05	0.0-2.9	0.0-0.5	.05	.28			
72:												
Lostine-----	0-7	10-18	1.10-1.30	0.60-2.00	0.19-0.21	0.0-2.9	3.0-4.0	.43	.43	4	5	56
	7-45	10-18	1.10-1.30	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49			
	45-60	10-28	1.10-1.30	2.00-6.00	0.07-0.21	0.0-2.9	0.5-1.0	.28	.37			
73:												
Manila-----	0-5	18-27	1.20-1.30	0.60-2.00	0.16-0.18	3.0-5.9	2.0-4.0	.43	.43	5	6	48
	5-19	35-40	1.35-1.45	0.06-0.20	0.17-0.19	6.0-8.9	1.0-3.0	.37	.37			
	19-45	35-55	1.35-1.45	0.06-0.20	0.17-0.19	6.0-8.9	1.0-3.0	.37	.37			
	45-60	12-18	1.20-1.30	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.49	.49			
74:												
Manila-----	0-5	18-27	1.20-1.30	0.60-2.00	0.16-0.18	3.0-5.9	2.0-4.0	.43	.43	5	6	48
	5-19	35-40	1.35-1.45	0.06-0.20	0.17-0.19	6.0-8.9	1.0-3.0	.37	.37			
	19-45	35-55	1.35-1.45	0.06-0.20	0.17-0.19	6.0-8.9	1.0-3.0	.37	.37			
	45-60	12-18	1.20-1.30	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.49	.49			
Broadhead-----	0-9	18-26	1.20-1.30	0.20-0.60	0.19-0.21	3.0-5.9	2.0-4.0	.32	.32	5	6	48
	9-15	35-50	1.30-1.50	0.06-0.20	0.15-0.21	6.0-8.9	1.0-3.0	.28	.28			
	15-36	40-60	1.25-1.40	0.00-0.06	0.14-0.17	6.0-8.9	0.5-1.0	.37	.37			
	36-41	32-50	1.40-1.50	0.06-0.20	0.15-0.21	6.0-8.9	1.0-3.0	.17	.32			
	41-60	32-50	1.40-1.50	0.06-0.20	0.15-0.21	6.0-8.9	1.0-3.0	.17	.32			
75:												
Manila-----	0-5	18-27	1.20-1.30	0.60-2.00	0.16-0.18	3.0-5.9	2.0-4.0	.43	.43	5	6	48
	5-19	35-40	1.35-1.45	0.06-0.20	0.17-0.19	6.0-8.9	1.0-3.0	.37	.37			
	19-45	35-55	1.35-1.45	0.06-0.20	0.17-0.19	6.0-8.9	1.0-3.0	.37	.37			
	45-60	12-18	1.20-1.30	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.49	.49			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
75: Broadhead-----	0-9	18-26	1.20-1.30	0.20-0.60	0.19-0.21	3.0-5.9	2.0-4.0	.32	.32	5	6	48
	9-15	35-50	1.30-1.50	0.06-0.20	0.15-0.21	6.0-8.9	1.0-3.0	.28	.28			
	15-36	40-60	1.25-1.40	0.00-0.06	0.14-0.17	6.0-8.9	0.5-1.0	.37	.37			
	36-41	32-50	1.40-1.50	0.06-0.20	0.15-0.21	6.0-8.9	1.0-3.0	.17	.32			
	41-60	32-50	1.40-1.50	0.06-0.20	0.15-0.21	6.0-8.9	1.0-3.0	.17	.32			
76: Manila-----	0-5	18-27	1.20-1.30	0.60-2.00	0.16-0.18	3.0-5.9	2.0-4.0	.43	.43	5	6	48
	5-19	35-40	1.35-1.45	0.06-0.20	0.17-0.19	6.0-8.9	1.0-3.0	.37	.37			
	19-45	35-55	1.35-1.45	0.06-0.20	0.17-0.19	6.0-8.9	1.0-3.0	.37	.37			
	45-60	12-18	1.20-1.30	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.49	.49			
Lonigan-----	0-11	5-18	0.95-1.05	2.00-6.00	0.16-0.18	0.0-2.9	1.0-2.0	.32	.43	3	3	86
	11-16	10-18	1.00-1.10	2.00-6.00	0.14-0.16	0.0-2.9	0.5-1.0	.24	.37			
	16-33	10-22	1.30-1.40	2.00-6.00	0.08-0.10	0.0-2.9	0.5-1.0	.24	.37			
	33-43	---	---	0.00-0.01	---	---	---	---	---			
77: Manila-----	0-5	18-27	1.20-1.30	0.60-2.00	0.16-0.18	3.0-5.9	2.0-4.0	.43	.43	5	6	48
	5-19	35-40	1.35-1.45	0.06-0.20	0.17-0.19	6.0-8.9	1.0-3.0	.37	.37			
	19-45	35-55	1.35-1.45	0.06-0.20	0.17-0.19	6.0-8.9	1.0-3.0	.37	.37			
	45-60	12-18	1.20-1.30	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.49	.49			
Obnot-----	0-5	27-35	1.35-1.45	0.00-0.06	0.16-0.18	3.0-5.9	2.0-4.0	.24	.37	5	8	0
	5-31	35-55	1.35-1.45	0.00-0.06	0.15-0.17	6.0-8.9	1.0-3.0	.24	.24			
	31-34	22-35	1.35-1.45	0.20-0.60	0.18-0.20	3.0-5.9	1.0-3.0	.32	.43			
	34-60	35-40	1.30-1.40	0.00-0.06	0.19-0.21	6.0-8.9	0.5-1.0	.24	.28			
78: Manila-----	0-5	18-27	1.20-1.30	0.60-2.00	0.16-0.18	3.0-5.9	2.0-4.0	.43	.43	5	6	48
	5-19	35-40	1.35-1.45	0.06-0.20	0.17-0.19	6.0-8.9	1.0-3.0	.37	.37			
	19-45	35-55	1.35-1.45	0.06-0.20	0.17-0.19	6.0-8.9	1.0-3.0	.37	.37			
	45-60	12-18	1.20-1.30	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.49	.49			
Yago-----	0-10	27-32	1.40-1.50	0.06-0.20	0.13-0.15	3.0-5.9	2.0-4.0	.17	.37	5	8	0
	10-40	32-40	1.30-1.40	0.06-0.20	0.09-0.11	6.0-8.9	1.0-3.0	.20	.37			
	40-60	23-34	1.40-1.50	0.06-0.20	0.15-0.18	3.0-5.9	1.0-3.0	.20	.43			
79: Manila-----	0-5	18-27	1.20-1.30	0.60-2.00	0.16-0.18	3.0-5.9	2.0-4.0	.43	.43	5	6	48
	5-19	35-40	1.35-1.45	0.06-0.20	0.17-0.19	6.0-8.9	1.0-3.0	.37	.37			
	19-45	35-55	1.35-1.45	0.06-0.20	0.17-0.19	6.0-8.9	1.0-3.0	.37	.37			
	45-60	12-18	1.20-1.30	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.49	.49			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
79:												
Yago-----	0-10	27-32	1.40-1.50	0.06-0.20	0.13-0.15	3.0-5.9	2.0-4.0	.17	.37	5	8	0
	10-40	32-40	1.30-1.40	0.06-0.20	0.09-0.11	6.0-8.9	1.0-3.0	.20	.37			
	40-60	23-34	1.40-1.50	0.06-0.20	0.15-0.18	3.0-5.9	1.0-3.0	.20	.43			
80:												
Mellor-----	0-4	15-24	1.20-1.30	0.20-0.60	0.12-0.15	3.0-5.9	1.0-3.0	.37	.37	5	4L	86
	4-16	27-35	1.30-1.40	0.06-0.20	0.11-0.13	3.0-5.9	1.0-2.0	.37	.37			
	16-60	18-27	1.20-1.30	0.20-0.60	0.11-0.13	3.0-5.9	0.5-1.0	.37	.37			
Freedom-----	0-13	18-27	1.10-1.15	0.60-2.00	0.17-0.19	3.0-5.9	1.0-3.0	.43	.43	5	4L	86
	13-34	18-27	1.15-1.25	0.60-2.00	0.17-0.19	3.0-5.9	1.0-3.0	.43	.43			
	34-60	15-35	1.15-1.25	0.60-2.00	0.16-0.18	3.0-5.9	0.5-1.0	.49	.49			
81:												
Neeley-----	0-7	5-14	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	7-14	6-18	1.25-1.45	0.60-2.00	0.19-0.21	0.0-2.9	1.0-2.0	.49	.49			
	14-65	6-14	1.25-1.45	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
82:												
Northwater-----	0-2	0-2	0.50-0.60	5.95-99.90	0.30-0.60	---	70-100	---	---	5	6	48
	2-20	15-22	1.20-1.30	0.60-2.00	0.14-0.16	0.0-2.9	2.0-4.0	.28	.37			
	20-31	15-22	1.20-1.30	0.60-2.00	0.12-0.15	0.0-2.9	1.0-3.0	.24	.43			
	31-37	18-32	1.25-1.35	0.60-2.00	0.09-0.12	3.0-5.9	0.5-1.0	.20	.37			
	37-62	18-32	1.25-1.35	0.60-2.00	0.09-0.12	3.0-5.9	0.5-1.0	.20	.32			
Povey-----	0-5	8-18	1.30-1.45	0.60-2.00	0.12-0.14	0.0-2.9	4.0-10	.20	.32	5	7	38
	5-12	10-20	1.30-1.45	0.60-2.00	0.06-0.11	0.0-2.9	2.0-6.0	.15	.32			
	12-20	15-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	1.0-3.0	.20	.37			
	20-35	8-18	1.30-1.45	0.60-2.00	0.06-0.08	0.0-2.9	0.5-2.0	.15	.32			
	35-60	8-18	1.10-1.65	2.00-6.00	0.03-0.21	0.0-2.9	1.0-2.0	.20	.28			
Pavohroo-----	0-1	0-2	0.50-0.60	5.95-99.90	0.30-0.60	---	70-100	---	---	5	5	56
	1-7	10-18	1.10-1.20	0.60-2.00	0.15-0.17	0.0-2.9	3.0-8.0	.24	.37			
	7-16	16-26	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	2.0-4.0	.37	.43			
	16-39	10-18	1.10-1.20	0.60-2.00	0.15-0.17	0.0-2.9	3.0-8.0	.24	.37			
	39-61	27-33	1.30-1.40	0.20-0.60	0.13-0.16	3.0-5.9	0.5-3.0	.20	.37			
83:												
Parehat-----	0-6	10-20	1.20-1.30	0.60-2.00	0.17-0.19	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	6-52	19-22	1.25-1.35	0.60-2.00	0.17-0.19	3.0-5.9	0.5-2.0	.43	.43			
	52-64	19-27	1.25-1.35	0.60-2.00	0.16-0.19	3.0-5.9	0.5-1.0	.37	.43			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
84: Parleys-----	0-5	18-27	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.37	.37	2	6	48
	5-26	27-35	1.20-1.40	0.20-0.60	0.19-0.21	3.0-5.9	1.0-3.0	.43	.43			
	26-64	18-27	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.0-0.5	.49	.49			
85: Parleys-----	0-5	18-27	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.37	.37	2	6	48
	5-26	27-35	1.20-1.40	0.20-0.60	0.19-0.21	3.0-5.9	1.0-3.0	.43	.43			
	26-64	18-27	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.0-0.5	.49	.49			
86: Parleys-----	0-5	18-27	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.37	.37	2	6	48
	5-26	27-35	1.20-1.40	0.20-0.60	0.19-0.21	3.0-5.9	1.0-3.0	.43	.43			
	26-64	18-27	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.0-0.5	.49	.49			
Welby-----	0-11	10-18	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	2.0-3.0	.43	.43	5	4L	86
	11-36	10-18	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.5-3.0	.43	.43			
	36-60	5-18	1.30-1.40	2.00-6.00	0.13-0.15	0.0-2.9	0.5-1.0	.37	.37			
87: Parleys-----	0-5	18-27	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.37	.37	2	6	48
	5-26	27-35	1.20-1.40	0.20-0.60	0.19-0.21	3.0-5.9	1.0-3.0	.43	.43			
	26-64	18-27	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.0-0.5	.49	.49			
Wheelon-----	0-8	18-27	1.30-1.40	0.60-2.00	0.19-0.21	3.0-5.9	1.0-3.0	.43	.43	5	4L	86
	8-14	24-34	1.40-1.50	0.20-0.60	0.19-0.21	3.0-5.9	0.5-1.0	.43	.43			
	14-20	18-30	1.35-1.55	0.20-0.60	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
	20-45	27-35	1.30-1.40	0.20-0.60	0.19-0.21	3.0-5.9	1.0-2.0	.37	.37			
	45-60	18-30	1.35-1.55	0.20-0.60	0.19-0.21	3.0-5.9	0.0-0.5	.43	.43			
88: Pavohroo-----	0-1	0-2	0.50-0.60	5.95-99.90	0.30-0.60	---	70-100	---	---	5	5	56
	1-7	10-18	1.10-1.20	0.60-2.00	0.15-0.17	0.0-2.9	3.0-8.0	.24	.37			
	7-16	16-26	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	2.0-4.0	.37	.43			
	16-39	10-18	1.10-1.20	0.60-2.00	0.15-0.17	0.0-2.9	3.0-8.0	.24	.37			
	39-61	27-33	1.30-1.40	0.20-0.60	0.13-0.16	3.0-5.9	0.5-3.0	.20	.37			
Povey-----	0-5	8-18	1.30-1.45	0.60-2.00	0.12-0.14	0.0-2.9	4.0-10	.20	.32	5	7	38
	5-12	10-20	1.30-1.45	0.60-2.00	0.06-0.11	0.0-2.9	2.0-6.0	.15	.32			
	12-20	15-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	1.0-3.0	.20	.37			
	20-35	8-18	1.30-1.45	0.60-2.00	0.06-0.08	0.0-2.9	0.5-2.0	.15	.32			
	35-60	8-18	1.10-1.65	2.00-6.00	0.03-0.21	0.0-2.9	1.0-2.0	.20	.28			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
89:												
Pavohroo-----	0-1	0-2	0.50-0.60	5.95-99.90	0.30-0.60	---	70-100	---	---	5	5	56
	1-7	10-18	1.10-1.20	0.60-2.00	0.15-0.17	0.0-2.9	3.0-8.0	.24	.37			
	7-16	16-26	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	2.0-4.0	.37	.43			
	16-39	10-18	1.10-1.20	0.60-2.00	0.15-0.17	0.0-2.9	3.0-8.0	.24	.37			
	39-61	27-33	1.30-1.40	0.20-0.60	0.13-0.16	3.0-5.9	0.5-3.0	.20	.37			
Stines-----	0-13	7-15	0.90-1.05	2.00-6.00	0.11-0.14	0.0-2.9	1.0-3.0	.20	.37	4	7	38
	13-24	7-15	0.90-1.10	2.00-6.00	0.07-0.10	0.0-2.9	1.0-2.0	.15	.37			
	24-44	7-15	1.10-1.25	2.00-6.00	0.06-0.09	0.0-2.9	0.5-1.0	.10	.32			
	44-60	5-15	1.10-1.25	6.00-20.00	0.01-0.02	0.0-2.9	0.0-0.5	.02	.10			
Lonigan-----	0-11	5-18	0.95-1.05	2.00-6.00	0.19-0.20	0.0-2.9	1.0-2.0	.32	.43	3	3	86
	11-16	10-18	1.00-1.10	2.00-6.00	0.14-0.16	0.0-2.9	0.5-1.0	.24	.37			
	16-33	10-22	1.30-1.40	2.00-6.00	0.08-0.10	0.0-2.9	0.5-1.0	.24	.37			
	33-43	---	---	0.00-0.01	---	---	---	---	---			
90:												
Pits, gravel-----	0-60	---	---	---	---	---	---	---	---	-	---	---
91:												
Povey-----	0-5	8-18	1.30-1.45	0.60-2.00	0.12-0.14	0.0-2.9	4.0-10	.20	.32	5	7	38
	5-12	10-20	1.30-1.45	0.60-2.00	0.06-0.11	0.0-2.9	2.0-6.0	.15	.32			
	12-20	15-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	1.0-3.0	.20	.37			
	20-35	8-18	1.30-1.45	0.60-2.00	0.06-0.08	0.0-2.9	0.5-2.0	.15	.32			
	35-60	8-18	1.10-1.65	2.00-6.00	0.03-0.21	0.0-2.9	1.0-2.0	.20	.28			
Hades-----	0-20	18-25	1.20-1.40	0.60-2.00	0.15-0.18	0.0-2.9	1.0-3.0	.32	.43	5	6	48
	20-42	27-35	1.30-1.40	0.20-0.60	0.19-0.21	3.0-5.9	1.0-2.0	.37	.37			
	42-60	27-35	1.30-1.40	0.20-0.60	0.16-0.18	0.0-2.9	0.5-1.0	.15	.32			
Hondoho-----	0-14	12-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	2.0-3.0	.20	.37	3	6	48
	14-28	15-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	1.0-3.0	.20	.37			
	28-60	5-19	1.35-1.50	2.00-6.00	0.04-0.07	0.0-2.9	0.0-1.0	.05	.28			
92:												
Povey-----	0-5	8-18	1.30-1.45	0.60-2.00	0.12-0.14	0.0-2.9	4.0-10	.20	.32	5	7	38
	5-12	10-20	1.30-1.45	0.60-2.00	0.06-0.11	0.0-2.9	2.0-6.0	.15	.32			
	12-20	15-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	1.0-3.0	.20	.37			
	20-35	8-18	1.30-1.45	0.60-2.00	0.06-0.08	0.0-2.9	0.5-2.0	.15	.32			
	35-60	8-18	1.10-1.65	2.00-6.00	0.03-0.21	0.0-2.9	1.0-2.0	.20	.28			
Ireland-----	0-8	10-16	1.30-1.50	0.60-2.00	0.09-0.11	0.0-2.9	2.0-4.0	.15	.43	2	8	0
	8-28	16-22	1.40-1.65	0.60-2.00	0.05-0.07	0.0-2.9	1.0-3.0	.15	.37			
	28-38	---	---	0.00-0.14	---	---	---	---	---			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
92: Calpac-----	0-8	10-18	1.20-1.30	0.60-2.00	0.15-0.17	0.0-2.9	3.0-5.0	.24	.37	5	7	38
	8-15	10-18	1.15-1.25	0.60-2.00	0.11-0.13	0.0-2.9	2.0-4.0	.17	.43			
	15-23	18-25	1.25-1.35	0.60-2.00	0.06-0.07	3.0-5.9	1.0-3.0	.10	.37			
	23-60	18-25	1.25-1.35	0.60-2.00	0.05-0.07	3.0-5.9	1.0-2.0	.10	.37			
93: Povey-----	0-5	8-18	1.30-1.45	0.60-2.00	0.12-0.14	0.0-2.9	4.0-10	.20	.32	5	7	38
	5-12	10-20	1.30-1.45	0.60-2.00	0.06-0.11	0.0-2.9	2.0-6.0	.15	.32			
	12-20	15-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	1.0-3.0	.20	.37			
	20-35	8-18	1.30-1.45	0.60-2.00	0.06-0.08	0.0-2.9	0.5-2.0	.15	.32			
	35-60	8-18	1.10-1.65	2.00-6.00	0.03-0.21	0.0-2.9	1.0-2.0	.20	.28			
Pavohroo-----	0-1	0-2	0.50-0.60	5.95-99.90	0.30-0.60	---	70-100	---	---	5	5	56
	1-7	10-18	1.10-1.20	0.60-2.00	0.15-0.17	0.0-2.9	3.0-8.0	.24	.37			
	7-16	16-26	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	2.0-4.0	.37	.43			
	16-39	10-18	1.10-1.20	0.60-2.00	0.15-0.17	0.0-2.9	3.0-8.0	.24	.37			
	39-61	27-33	1.30-1.40	0.20-0.60	0.13-0.16	3.0-5.9	0.5-3.0	.20	.37			
94: Povirt-----	0-10	27-40	1.25-1.40	0.00-0.20	0.15-0.18	6.0-8.9	1.0-3.0	.43	.43	5	4	86
	10-20	27-50	1.25-1.40	0.00-0.20	0.15-0.18	6.0-8.9	1.0-3.0	.43	.43			
	20-60	40-60	1.25-1.40	0.00-0.06	0.14-0.17	6.0-8.9	0.5-1.0	.37	.37			
95: Raldridge-----	0-3	15-25	1.25-1.35	0.60-2.00	0.13-0.15	3.0-5.9	1.0-2.0	.32	.43	5	6	48
	3-14	27-35	1.35-1.45	0.20-0.60	0.14-0.16	3.0-5.9	1.0-2.0	.37	.43			
	14-22	27-31	1.35-1.45	0.20-0.60	0.10-0.12	3.0-5.9	1.0-2.0	.32	.37			
	22-60	15-20	1.25-1.35	2.00-6.00	0.06-0.08	0.0-2.9	0.5-1.0	.28	.37			
96: Rexburg-----	0-14	12-18	1.20-1.35	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	14-22	14-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49			
	22-60	10-16	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
97: Rexburg-----	0-14	12-18	1.20-1.35	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	14-22	14-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49			
	22-60	10-16	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
Arbone-----	0-15	13-18	1.30-1.50	0.60-2.00	0.14-0.17	0.0-2.9	1.0-3.0	.43	.49	5	5	56
	15-60	13-18	1.35-1.55	0.60-2.00	0.12-0.15	0.0-2.9	0.5-1.0	.32	.49			
Ririe-----	0-14	15-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	5	5	56
	14-63	12-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
98:												
Rexburg-----	0-14	12-18	1.20-1.35	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	14-22	14-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49			
	22-60	10-16	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
Arbone-----	0-15	13-18	1.30-1.50	0.60-2.00	0.14-0.17	0.0-2.9	1.0-3.0	.43	.49	5	5	56
	15-60	13-18	1.35-1.55	0.60-2.00	0.12-0.15	0.0-2.9	0.5-1.0	.32	.49			
Ririe-----	0-14	15-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	5	5	56
	14-63	12-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
99:												
Rexburg-----	0-14	12-18	1.20-1.35	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	14-22	14-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49			
	22-60	10-16	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
Iphil-----	0-10	7-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.43	.43	5	4L	86
	10-36	10-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-2.0	.49	.49			
	36-60	12-18	1.20-1.30	0.60-2.00	0.18-0.21	0.0-2.9	0.5-1.0	.49	.49			
Watercanyon-----	0-5	10-18	1.15-1.25	0.60-2.00	0.16-0.20	0.0-2.9	1.0-2.0	.49	.49	5	5	56
	5-33	5-16	1.20-1.40	0.60-2.00	0.14-0.18	0.0-2.9	0.5-1.0	.55	.55			
	33-62	5-16	1.20-1.40	0.60-2.00	0.14-0.18	0.0-2.9	0.5-1.0	.55	.55			
100:												
Rexburg-----	0-14	12-18	1.20-1.35	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	14-22	14-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49			
	22-60	10-16	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
Lanoak-----	0-30	10-20	1.12-1.35	0.60-2.00	0.19-0.21	0.0-2.9	3.0-5.0	.37	.37	5	5	56
	30-49	12-20	1.12-1.35	0.60-2.00	0.19-0.21	0.0-2.9	3.0-5.0	.37	.37			
	49-60	18-27	1.25-1.55	0.60-2.00	0.19-0.21	3.0-5.9	1.0-3.0	.49	.49			
101:												
Rexburg-----	0-14	12-18	1.20-1.35	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	14-22	14-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49			
	22-60	10-16	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
Lanoak-----	0-30	10-20	1.12-1.35	0.60-2.00	0.19-0.21	0.0-2.9	3.0-5.0	.37	.37	5	5	56
	30-49	12-20	1.12-1.35	0.60-2.00	0.19-0.21	0.0-2.9	3.0-5.0	.37	.37			
	49-60	18-27	1.25-1.55	0.60-2.00	0.19-0.21	3.0-5.9	1.0-3.0	.49	.49			
102:												
Rexburg-----	0-14	12-18	1.20-1.35	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	14-22	14-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49			
	22-60	10-16	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
102:												
Lanoak-----	0-30	10-20	1.12-1.35	0.60-2.00	0.19-0.21	0.0-2.9	3.0-5.0	.37	.37	5	5	56
	30-49	12-20	1.12-1.35	0.60-2.00	0.19-0.21	0.0-2.9	3.0-5.0	.37	.37			
	49-60	18-27	1.25-1.55	0.60-2.00	0.19-0.21	3.0-5.9	1.0-3.0	.49	.49			
Watercanyon-----	0-5	10-18	1.15-1.25	0.60-2.00	0.16-0.20	0.0-2.9	1.0-2.0	.49	.49	5	5	56
	5-33	5-16	1.20-1.40	0.60-2.00	0.14-0.18	0.0-2.9	0.5-1.0	.55	.55			
	33-62	5-16	1.20-1.40	0.60-2.00	0.14-0.18	0.0-2.9	0.5-1.0	.55	.55			
103:												
Rexburg-----	0-14	12-18	1.20-1.35	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	14-22	14-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49			
	22-60	10-16	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
Ririe-----	0-14	15-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	5	5	56
	14-60	12-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
Kucera-----	0-22	10-18	1.40-1.50	0.60-2.00	0.19-0.21	0.0-2.9	2.0-5.0	.43	.43	5	5	56
	22-42	10-18	1.40-1.55	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49			
	42-60	10-18	1.40-1.55	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
104:												
Rexburg-----	0-14	12-18	1.20-1.35	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	14-22	14-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49			
	22-60	10-16	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
Thatcher-----	0-7	16-25	1.35-1.45	0.60-2.00	0.17-0.18	0.0-2.9	2.0-3.0	.28	.28	5	6	48
	7-35	28-35	1.35-1.45	0.20-0.60	0.15-0.18	0.0-2.9	1.0-2.0	.49	.49			
	35-60	12-25	1.35-1.50	0.60-2.00	0.11-0.17	0.0-2.9	0.5-1.0	.49	.49			
Ririe-----	0-14	15-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	5	5	56
	14-60	12-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
105:												
Rexburg-----	0-14	12-18	1.20-1.35	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	14-22	14-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49			
	22-60	10-16	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
Watercanyon-----	0-5	10-18	1.15-1.25	0.60-2.00	0.16-0.20	0.0-2.9	1.0-2.0	.49	.49	5	5	56
	5-33	5-16	1.20-1.40	0.60-2.00	0.14-0.18	0.0-2.9	0.5-1.0	.55	.55			
	33-62	5-16	1.20-1.40	0.60-2.00	0.14-0.18	0.0-2.9	0.5-1.0	.55	.55			
Lanoak-----	0-30	10-20	1.12-1.35	0.60-2.00	0.19-0.21	0.0-2.9	3.0-5.0	.37	.37	5	5	56
	30-49	12-20	1.12-1.35	0.60-2.00	0.19-0.21	0.0-2.9	3.0-5.0	.37	.37			
	49-60	18-27	1.25-1.55	0.60-2.00	0.19-0.21	3.0-5.9	1.0-3.0	.49	.49			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
106:												
Ridgecrest-----	0-9	12-17	1.20-1.30	0.60-2.00	0.10-0.13	0.0-2.9	2.0-4.0	.20	.37	2	6	48
	9-13	12-17	1.20-1.30	0.60-2.00	0.13-0.17	0.0-2.9	2.0-4.0	.24	.37			
	13-31	12-17	1.30-1.40	0.60-2.00	0.08-0.11	0.0-2.9	1.0-3.0	.17	.43			
	31-35	8-16	1.50-1.60	2.00-6.00	0.03-0.05	0.0-2.9	0.5-1.0	.10	.32			
	35-45	---	---	0.00-0.14	---	---	---	---	---			
Hondoho-----	0-14	12-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	2.0-3.0	.20	.37	3	6	48
	14-28	15-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	1.0-3.0	.20	.37			
	28-60	5-19	1.35-1.50	2.00-6.00	0.04-0.07	0.0-2.9	0.0-1.0	.05	.28			
107:												
Ridgecrest-----	0-9	12-17	1.20-1.30	0.60-2.00	0.10-0.13	0.0-2.9	2.0-4.0	.20	.37	2	6	48
	9-13	12-17	1.20-1.30	0.60-2.00	0.13-0.17	0.0-2.9	2.0-4.0	.24	.37			
	13-31	12-17	1.30-1.40	0.60-2.00	0.08-0.11	0.0-2.9	1.0-3.0	.17	.43			
	31-35	8-16	1.50-1.60	2.00-6.00	0.03-0.05	0.0-2.9	0.5-1.0	.10	.32			
	35-45	---	---	0.00-0.14	---	---	---	---	---			
Hondoho-----	0-14	12-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	2.0-3.0	.20	.37	3	6	48
	14-28	15-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	1.0-3.0	.20	.37			
	28-60	5-19	1.35-1.50	2.00-6.00	0.04-0.07	0.0-2.9	0.0-1.0	.05	.28			
Hymas-----	0-2	10-15	1.25-1.35	0.60-2.00	0.13-0.16	0.0-2.9	2.0-3.0	.15	.43	1	8	0
	2-7	10-18	1.35-1.45	0.60-2.00	0.09-0.12	0.0-2.9	1.0-2.0	.17	.43			
	7-11	10-18	1.35-1.45	0.60-2.00	0.07-0.11	0.0-2.9	0.5-1.0	.10	.43			
	11-21	---	---	0.00-0.14	---	---	---	---	---			
108:												
Ridgecrest-----	0-9	12-17	1.20-1.30	0.60-2.00	0.10-0.13	0.0-2.9	2.0-4.0	.20	.37	2	6	48
	9-13	12-17	1.20-1.30	0.60-2.00	0.13-0.17	0.0-2.9	2.0-4.0	.24	.37			
	13-31	12-17	1.30-1.40	0.60-2.00	0.08-0.11	0.0-2.9	1.0-3.0	.17	.43			
	31-35	8-16	1.50-1.60	2.00-6.00	0.03-0.05	0.0-2.9	0.5-1.0	.10	.32			
	35-45	---	---	0.00-0.14	---	---	---	---	---			
Hondoho-----	0-14	12-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	2.0-3.0	.20	.37	3	6	48
	14-28	15-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	1.0-3.0	.20	.37			
	28-60	5-19	1.35-1.50	2.00-6.00	0.04-0.07	0.0-2.9	0.0-1.0	.05	.28			
Lizdale-----	0-7	10-18	1.15-1.25	0.60-2.00	0.11-0.13	0.0-2.9	2.0-4.0	.17	.49	2	6	48
	7-10	10-18	1.25-1.35	2.00-6.00	0.08-0.10	0.0-2.9	1.0-3.0	.05	.15			
	10-36	10-15	1.45-1.55	6.00-20.00	0.05-0.07	0.0-2.9	1.0-3.0	.15	.20			
	36-52	3-25	1.40-1.50	1.98-5.95	0.10-0.14	0.0-2.9	0.0-0.5	.20	.20			
	52-60	3-10	1.15-1.30	2.00-20.00	0.03-0.05	0.0-2.9	0.0-0.5	.05	.28			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
109:												
Ridgecrest-----	0-9	12-17	1.20-1.30	0.60-2.00	0.10-0.13	0.0-2.9	2.0-4.0	.20	.37	2	6	48
	9-13	12-17	1.20-1.30	0.60-2.00	0.13-0.17	0.0-2.9	2.0-4.0	.24	.37			
	13-31	12-17	1.30-1.40	0.60-2.00	0.08-0.11	0.0-2.9	1.0-3.0	.17	.43			
	31-35	8-16	1.50-1.60	2.00-6.00	0.03-0.05	0.0-2.9	0.5-1.0	.10	.32			
	35-45	---	---	0.00-0.14	---	---	---	---	---			
Hymas-----	0-2	10-15	1.25-1.35	0.60-2.00	0.13-0.16	0.0-2.9	2.0-3.0	.15	.43	1	8	0
	2-7	10-18	1.35-1.45	0.60-2.00	0.09-0.12	0.0-2.9	1.0-2.0	.17	.43			
	7-11	10-18	1.35-1.45	0.60-2.00	0.07-0.11	0.0-2.9	0.5-1.0	.10	.43			
	11-21	---	---	0.00-0.14	---	---	---	---	---			
110:												
Ririe-----	0-14	15-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	5	5	56
	14-60	12-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
Buist-----	0-15	13-18	1.35-1.55	0.60-2.00	0.12-0.15	0.0-2.9	0.5-1.0	.32	.49	2	6	48
	15-28	16-23	1.30-1.40	0.60-2.00	0.10-0.13	0.0-2.9	1.0-3.0	.32	.43			
	28-60	5-10	1.45-1.55	0.57-6.00	0.05-0.09	0.0-2.9	0.5-1.0	.05	.37			
111:												
Ririe-----	0-14	15-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	5	5	56
	14-60	12-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
Cedarhill-----	0-7	15-27	1.20-1.35	0.57-1.98	0.10-0.12	0.0-2.9	2.0-3.0	.20	.37	5	6	48
	7-12	18-24	1.30-1.40	0.60-2.00	0.11-0.14	3.0-5.9	0.5-1.0	.32	.43			
	12-27	10-17	1.30-1.40	0.60-2.00	0.10-0.13	0.0-2.9	1.0-2.0	.17	.43			
	27-60	2-18	1.20-2.00	0.57-5.95	0.03-0.08	0.0-3.0	1.0-2.0	.15	.24			
112:												
Ririe-----	0-14	15-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	5	5	56
	14-60	12-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
Cedarhill-----	0-7	15-27	1.20-1.35	0.57-1.98	0.10-0.12	0.0-2.9	2.0-3.0	.20	.37	5	6	48
	7-12	18-24	1.30-1.40	0.60-2.00	0.11-0.14	3.0-5.9	0.5-1.0	.32	.43			
	12-27	10-17	1.30-1.40	0.60-2.00	0.10-0.13	0.0-2.9	1.0-2.0	.17	.43			
	27-60	2-18	1.20-2.00	0.57-5.95	0.03-0.08	0.0-3.0	1.0-2.0	.15	.24			
113:												
Ririe-----	0-14	15-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	5	5	56
	14-60	12-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
Hondoho-----	0-14	12-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	2.0-3.0	.20	.37	3	6	48
	14-28	15-25	1.20-1.30	0.60-2.00	0.13-0.15	3.0-5.9	1.0-3.0	.20	.37			
	28-60	5-19	1.35-1.50	2.00-6.00	0.04-0.07	0.0-2.9	0.0-1.0	.05	.28			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
114:												
Ririe-----	0-14	15-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	5	5	56
	14-60	12-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
Iphil-----	0-10	7-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.43	.43	5	4L	86
	10-36	10-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-2.0	.49	.49			
	36-60	12-18	1.20-1.30	0.60-2.00	0.18-0.21	0.0-2.9	0.5-1.0	.49	.49			
Kucera-----	0-22	10-18	1.40-1.50	0.60-2.00	0.19-0.21	0.0-2.9	2.0-5.0	.43	.43	5	5	56
	22-42	10-18	1.40-1.55	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49			
	42-60	10-18	1.40-1.55	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
115:												
Ririe-----	0-14	15-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	5	5	56
	14-60	12-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
Iphil-----	0-10	7-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.43	.43	5	4L	86
	10-36	10-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-2.0	.49	.49			
	36-60	12-18	1.20-1.30	0.60-2.00	0.18-0.21	0.0-2.9	0.5-1.0	.49	.49			
Rexburg-----	0-14	12-18	1.20-1.35	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	14-22	14-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49			
	22-60	10-16	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
116:												
Ririe-----	0-14	15-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	5	5	56
	14-63	12-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
Rexburg-----	0-14	12-18	1.20-1.35	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.43	.43	5	5	56
	14-22	14-18	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.49	.49			
	22-60	10-16	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
117:												
Ririe-----	0-14	15-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	5	5	56
	14-63	12-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			
Watercanyon-----	0-5	10-18	1.15-1.25	0.60-2.00	0.16-0.20	0.0-2.9	1.0-2.0	.49	.49	5	5	56
	5-33	5-16	1.20-1.40	0.60-2.00	0.14-0.18	0.0-2.9	0.5-1.0	.55	.55			
	33-62	5-16	1.20-1.40	0.60-2.00	0.14-0.18	0.0-2.9	0.5-1.0	.55	.55			
118:												
Ririe-----	0-14	15-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	5	5	56
	14-63	12-18	1.50-1.60	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.55	.55			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
118: Watercanyon-----	0-5	10-18	1.15-1.25	0.60-2.00	0.16-0.20	0.0-2.9	1.0-2.0	.49	.49	5	5	56
	5-33	5-16	1.20-1.40	0.60-2.00	0.14-0.18	0.0-2.9	0.5-1.0	.55	.55			
	33-62	5-16	1.20-1.40	0.60-2.00	0.14-0.18	0.0-2.9	0.5-1.0	.55	.55			
119: Samaria-----	0-5	17-23	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	2	4L	86
	5-16	17-23	1.30-1.40	0.60-2.00	0.13-0.18	0.0-2.9	1.0-3.0	.32	.49			
	16-27	18-23	1.30-1.40	0.60-2.00	0.13-0.15	0.0-2.9	0.5-1.0	.28	.43			
	27-64	17-23	1.40-1.50	2.00-6.00	0.07-0.10	0.0-2.9	0.0-0.5	.17	.32			
120: Samaria-----	0-5	17-23	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	2	4L	86
	5-16	17-23	1.30-1.40	0.60-2.00	0.13-0.18	0.0-2.9	1.0-3.0	.32	.49			
	16-27	18-23	1.30-1.40	0.60-2.00	0.13-0.15	0.0-2.9	0.5-1.0	.28	.43			
	27-64	17-23	1.40-1.50	2.00-6.00	0.07-0.10	0.0-2.9	0.0-0.5	.17	.32			
121: Samaria-----	0-5	17-23	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	2	4L	86
	5-16	17-23	1.30-1.40	0.60-2.00	0.13-0.18	0.0-2.9	1.0-3.0	.32	.49			
	16-27	18-23	1.30-1.40	0.60-2.00	0.13-0.15	0.0-2.9	0.5-1.0	.28	.43			
	27-64	17-23	1.40-1.50	2.00-6.00	0.07-0.10	0.0-2.9	0.0-0.5	.17	.32			
Pollynot-----	0-7	15-24	1.25-1.35	0.60-2.00	0.19-0.21	3.0-5.9	1.0-4.0	.37	.37	4	6	48
	7-17	18-26	1.25-1.35	0.60-2.00	0.19-0.21	3.0-5.9	1.0-4.0	.37	.37			
	17-41	13-18	1.30-1.50	0.60-2.00	0.16-0.18	0.0-2.9	1.0-3.0	.28	.32			
	41-56	10-15	1.45-1.55	6.00-20.00	0.05-0.07	0.0-2.9	1.0-3.0	.15	.20			
	56-60	7-12	1.20-1.40	0.57-1.98	0.04-0.06	0.0-2.9	0.5-1.0	.05	.37			
122: Samaria-----	0-5	17-23	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.43	.43	2	4L	86
	5-16	17-23	1.30-1.40	0.60-2.00	0.13-0.18	0.0-2.9	1.0-3.0	.32	.49			
	16-27	18-23	1.30-1.40	0.60-2.00	0.13-0.15	0.0-2.9	0.5-1.0	.28	.43			
	27-64	17-23	1.40-1.50	2.00-6.00	0.07-0.10	0.0-2.9	0.0-0.5	.17	.32			
Sterling-----	0-13	10-20	1.30-1.40	0.60-2.00	0.08-0.11	0.0-2.9	2.0-4.0	.15	.37	5	6	48
	13-66	10-22	1.30-1.40	0.60-2.00	0.05-0.11	0.0-2.9	0.5-3.0	.10	.37			
123: Sterling-----	0-13	10-20	1.30-1.40	0.60-2.00	0.08-0.11	0.0-2.9	2.0-4.0	.15	.37	5	6	48
	13-66	10-22	1.30-1.40	0.60-2.00	0.05-0.11	0.0-2.9	0.5-3.0	.10	.37			
124: Thatcher-----	0-7	16-25	1.35-1.45	0.60-2.00	0.17-0.18	0.0-2.9	2.0-3.0	.28	.28	5	6	48
	7-35	28-35	1.35-1.45	0.20-0.60	0.15-0.18	0.0-2.9	1.0-2.0	.49	.49			
	35-60	12-25	1.35-1.50	0.60-2.00	0.11-0.17	0.0-2.9	0.5-1.0	.49	.49			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
125:												
Thatcher-----	0-7	16-25	1.35-1.45	0.60-2.00	0.17-0.18	0.0-2.9	2.0-3.0	.28	.28	5	6	48
	7-35	28-35	1.35-1.45	0.20-0.60	0.15-0.18	0.0-2.9	1.0-2.0	.49	.49			
	35-60	12-25	1.35-1.50	0.60-2.00	0.11-0.17	0.0-2.9	0.5-1.0	.49	.49			
Jensen-----	0-12	14-22	1.20-1.40	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.37	.37	5	5	56
	12-45	18-25	1.20-1.40	0.60-2.00	0.15-0.18	3.0-5.9	1.0-2.0	.28	.43			
	45-60	14-22	1.30-1.40	0.60-2.00	0.05-0.10	0.0-2.9	0.5-1.0	.17	.49			
126:												
Freedom-----	0-13	18-27	1.10-1.15	0.60-2.00	0.17-0.19	3.0-5.9	1.0-3.0	.43	.43	5	4L	86
	13-34	18-27	1.15-1.25	0.60-2.00	0.17-0.19	3.0-5.9	1.0-3.0	.43	.43			
	34-60	15-35	1.15-1.25	0.60-2.00	0.16-0.18	3.0-5.9	0.5-1.0	.49	.49			
127:												
Tickason-----	0-10	10-14	1.50-1.60	0.60-2.00	0.15-0.17	0.0-2.9	1.0-3.0	.28	.28	5	3	86
	10-23	10-18	1.45-1.55	0.60-2.00	0.14-0.16	0.0-2.9	1.0-3.0	.28	.28			
	23-31	10-18	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	31-38	10-18	1.40-1.50	0.60-2.00	0.16-0.18	0.0-2.9	0.5-1.0	.32	.32			
	38-60	10-18	1.45-1.55	0.60-2.00	0.14-0.16	0.0-2.9	1.0-3.0	.28	.28			
128:												
Tickason-----	0-10	10-14	1.50-1.60	0.60-2.00	0.15-0.17	0.0-2.9	1.0-3.0	.28	.28	5	3	86
	10-23	10-18	1.45-1.55	0.60-2.00	0.14-0.16	0.0-2.9	1.0-3.0	.28	.28			
	23-31	10-18	1.45-1.55	0.60-2.00	0.15-0.18	0.0-2.9	0.5-1.0	.28	.28			
	31-38	10-18	1.40-1.50	0.60-2.00	0.16-0.18	0.0-2.9	0.5-1.0	.32	.32			
	38-60	10-18	1.45-1.55	0.60-2.00	0.14-0.16	0.0-2.9	1.0-3.0	.28	.28			
129:												
Tirod-----	0-18	18-27	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	2.0-4.0	.32	.32	5	6	48
	18-30	18-27	1.20-1.30	0.60-2.00	0.19-0.21	3.0-5.9	2.0-4.0	.32	.32			
	30-40	22-35	1.35-1.45	0.20-0.60	0.18-0.20	3.0-5.9	1.0-3.0	.32	.43			
	40-62	20-27	1.30-1.50	0.60-2.00	0.17-0.20	3.0-5.9	0.5-1.0	.37	.43			
130:												
Toefoot-----	0-26	13-18	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	2.0-5.0	.43	.43	4	5	56
	26-33	13-17	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	1.0-3.0	.43	.43			
	33-40	13-17	1.30-1.50	0.60-6.00	0.07-0.13	0.0-2.9	1.0-3.0	.15	.32			
	40-62	13-17	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.5-1.0	.43	.43			
131:												
Welby-----	0-11	10-18	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	2.0-3.0	.43	.43	5	4L	86
	11-36	10-18	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.5-3.0	.43	.43			
	36-60	5-18	1.30-1.40	2.00-6.00	0.13-0.15	0.0-2.9	0.5-1.0	.37	.37			

Table 14.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (K _{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
131: Parleys-----	0-5	18-27	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	2.0-4.0	.37	.37	2	6	48
	5-26	27-35	1.20-1.40	0.20-0.60	0.19-0.21	3.0-5.9	1.0-3.0	.43	.43			
	26-64	18-27	1.20-1.30	0.60-2.00	0.19-0.21	0.0-2.9	0.0-0.5	.49	.49			
132: Wursten-----	0-16	13-18	1.20-1.45	0.60-2.00	0.13-0.17	0.0-2.9	1.0-2.0	.32	.43	5	4L	86
	16-60	13-18	1.30-1.40	0.60-2.00	0.11-0.16	0.0-2.9	0.0-1.0	.28	.49			
133: Yago-----	0-10	27-32	1.40-1.50	0.06-0.20	0.13-0.15	3.0-5.9	2.0-4.0	.17	.37	5	8	0
	10-40	32-40	1.30-1.40	0.06-0.20	0.09-0.11	6.0-8.9	1.0-3.0	.20	.37			
	40-60	23-34	1.40-1.50	0.06-0.20	0.15-0.18	3.0-5.9	1.0-3.0	.20	.43			
Manila-----	0-5	18-27	1.20-1.30	0.60-2.00	0.16-0.18	3.0-5.9	2.0-4.0	.43	.43	5	6	48
	5-19	35-40	1.35-1.45	0.06-0.20	0.17-0.19	6.0-8.9	1.0-3.0	.37	.37			
	19-45	35-55	1.35-1.45	0.06-0.20	0.17-0.19	6.0-8.9	1.0-3.0	.37	.37			
	45-60	12-18	1.20-1.30	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.49	.49			
134: Water-----	---	---	---	---	---	---	---	---	---	-	---	---

Table 15.--Chemical Properties of the Soils

(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
1:								
Araveton-----	0-8	10-25	---	6.6-7.8	0	0	0	0
	8-36	10-20	---	7.4-7.8	0-20	0	0.0-2.0	0
	36-62	10-15	---	7.4-8.4	15-35	0	0.0-2.0	0-5
Hades-----	0-20	10-20	---	6.6-7.3	0	0	0	0
	20-42	20-30	---	6.6-7.8	0	0	0	0
	42-60	15-25	---	6.6-7.8	0-5	0	0	0
2:								
Arbone-----	0-15	7.0-15	---	7.4-8.4	0	0	0	0
	15-60	6.0-13	---	7.4-8.4	5-30	0	0	0
3:								
Arbone-----	0-15	7.0-15	---	7.4-8.4	0	0	0	0
	15-60	6.0-13	---	7.4-8.4	5-30	0	0	0
4:								
Arbone-----	0-15	7.0-15	---	7.4-8.4	0	0	0	0
	15-60	6.0-13	---	7.4-8.4	5-30	0	0	0
5:								
Arbone-----	0-15	7.0-15	---	7.4-8.4	0	0	0	0
	15-60	6.0-13	---	7.4-8.4	5-30	0	0	0
Hondoho-----	0-14	9.0-20	---	6.6-7.8	0	0	0	0
	14-28	8.0-20	---	7.4-8.4	5-30	0	0	0
	28-60	3.0-20	---	7.4-8.4	15-40	0	0	0
Cedarhill-----	0-7	6.0-15	---	7.4-7.8	10-15	0	0	0
	7-12	6.0-15	---	7.4-8.4	15-35	0	0	0
	12-27	4.0-10	---	7.4-8.4	15-35	0	0	0
	27-60	4.0-10	---	7.9-8.4	15-35	0	0	0
6:								
Arbone-----	0-15	7.0-15	---	7.4-8.4	0	0	0	0
	15-60	6.0-13	---	7.4-8.4	5-30	0	0	0
Hondoho-----	0-14	9.0-20	---	6.6-7.8	0	0	0	0
	14-28	8.0-20	---	7.4-8.4	5-30	0	0	0
	28-60	3.0-20	---	7.4-8.4	15-40	0	0	0
Cedarhill-----	0-7	6.0-15	---	7.4-7.8	10-15	0	0	0
	7-12	6.0-15	---	7.4-8.4	15-35	0	0	0
	12-27	4.0-10	---	7.4-8.4	15-35	0	0	0
	27-60	4.0-10	---	7.9-8.4	15-35	0	0	0
7:								
Bayhook-----	0-7	4.0-15	---	7.9-9.0	5-10	0	2.0-8.0	0
	7-13	5.0-10	---	7.9-9.0	5-20	0	2.0-8.0	5-25
	13-60	3.0-10	---	8.5-9.0	15-30	0	4.0-8.0	13-30
8:								
Bayhook-----	0-7	4.0-15	---	7.9-9.0	5-10	0	2.0-8.0	0
	7-13	5.0-10	---	7.9-9.0	5-20	0	2.0-8.0	5-25
	13-60	3.0-10	---	8.5-9.0	15-30	0	4.0-8.0	13-30

Table 15.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
8:								
Ecur-----	0-15	7.0-15	---	7.9-9.0	20-35	0	0.0-4.0	0-13
	15-37	3.0-15	---	8.5-11.0	30-45	0	0.0-2.0	13-30
	37-44	1.0-5.0	---	8.5-11.0	20-35	0-3	0.0-2.0	13-30
	44-49	2.0-7.0	---	8.5-11.0	20-35	0-3	0.0-2.0	13-30
	49-60	1.0-5.0	---	8.5-11.0	20-35	0-3	0.0-2.0	13-30
9:								
Bingham-----	0-6	8.0-20	---	6.6-7.3	0	0	0	0
	6-27	10-20	---	6.6-7.8	0-10	0	0	0
	27-38	6.0-15	---	7.4-8.4	15-35	0	0	0
	38-45	3.0-8.0	---	7.4-8.4	15-35	0	0	0
	45-65	3.0-8.0	---	7.4-8.4	15-35	0	0	0
10:								
Bingham-----	0-6	8.0-20	---	6.6-7.3	0	0	0	0
	6-27	10-20	---	6.6-7.8	0-10	0	0	0
	27-38	6.0-15	---	7.4-8.4	15-35	0	0	0
	38-45	3.0-8.0	---	7.4-8.4	15-35	0	0	0
	45-65	3.0-8.0	---	7.4-8.4	15-35	0	0	0
Tirod-----	0-18	10-25	---	6.6-7.8	0	0	0	0
	18-30	10-30	---	6.6-8.4	0	0	0	0
	30-40	10-30	---	6.6-8.4	0	0	0	0
	40-62	10-15	---	7.9-8.4	15-25	0	0	0
11:								
Bloor-----	0-12	10-20	---	7.9-9.0	0	0	8.0-16.0	13-30
	12-20	15-30	---	7.9-9.0	0-5	0	4.0-32.0	13-30
	20-29	5.0-15	---	8.5-9.5	1-10	0	8.0-32.0	13-30
	29-47	5.0-15	---	8.5-9.5	1-10	0	8.0-32.0	13-30
	47-60	5.0-15	---	8.5-9.5	1-5	0	8.0-32.0	13-30
Brinnum-----	0-9	8.0-20	---	9.1-9.6	15-35	0	2.0-8.0	5-15
	9-31	8.0-20	---	9.1-9.6	25-35	0	16.0-32.0	50-100
	31-60	7.0-20	---	8.5-9.6	25-45	0	16.0-32.0	40-90
12:								
Bothwell-----	0-9	10-20	---	6.6-7.8	0	0	0.0-2.0	0
	9-20	10-20	---	6.6-7.8	0	0	0.0-2.0	0
	20-45	15-25	---	6.6-8.4	0	0	0.0-2.0	0
	45-60	10-20	---	6.6-8.4	5-15	0	0.0-2.0	0
13:								
Bothwell-----	0-9	10-20	---	6.6-7.8	0	0	0.0-2.0	0
	9-20	10-20	---	6.6-7.8	0	0	0.0-2.0	0
	20-45	15-25	---	6.6-8.4	0	0	0.0-2.0	0
	45-60	10-20	---	6.6-8.4	5-15	0	0.0-2.0	0
Hades-----	0-20	10-20	---	6.6-7.3	0	0	0	0
	20-42	20-30	---	6.6-7.8	0	0	0	0
	42-60	15-25	---	6.6-7.8	0-5	0	0	0
Justesen-----	0-8	7.0-20	---	6.6-7.3	0	0	0	0
	8-16	10-30	---	6.6-7.3	0	0	0	0
	16-27	10-30	---	6.6-7.8	0	0	0	0
	27-45	8.0-20	---	7.4-8.4	5-20	0	0	0
	45-60	8.0-20	---	7.4-8.4	5-20	0	0	0

Table 15.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
14:								
Brinnum-----	0-9	8.0-20	---	9.1-9.6	15-35	0	2.0-8.0	5-15
	9-31	8.0-20	---	9.1-9.6	25-35	0	16.0-32.0	50-100
	31-60	7.0-20	---	8.5-9.6	25-45	0	16.0-32.0	40-90
Logan-----	0-4	---	20-30	4.5-5.5	0	0	0	0
	4-22	15-30	---	7.9-9.0	5-20	0	0.0-2.0	5-15
	22-64	10-25	---	7.9-9.0	15-35	0	0.0-2.0	5-15
Langless-----	0-3	---	20-30	4.5-5.5	0	0	0	0
	3-9	1.0-20	---	7.9-9.0	20-40	0	4.0-8.0	10-15
	9-47	8.0-20	---	7.9-9.0	40-65	0	4.0-8.0	10-15
	47-63	7.0-15	---	7.9-8.4	15-35	0	4.0-8.0	5-10
15:								
Buckboard-----	0-15	15-20	---	7.4-7.8	0	0	0	0
	15-50	10-25	---	7.4-8.4	0	0	0	0
	50-65	10-20	---	7.9-8.4	5-10	0	0	0
16:								
Buist-----	0-15	5.0-15	---	7.4-7.8	0	0	0.0-2.0	0-5
	15-28	8.0-20	---	7.9-8.4	15-40	0	0.0-2.0	0-5
	28-60	8.0-20	---	7.9-8.4	15-40	0	0.0-2.0	0-5
17:								
Calpac-----	0-8	10-20	---	6.6-7.3	0	0	0	0
	8-15	8.0-20	---	6.6-7.3	0	0	0	0
	15-23	9.0-20	---	7.4-7.8	0	0	0	0
	23-60	9.0-20	---	7.4-8.4	5-14	0	0.0-2.0	0
Ridgecrest-----	0-9	9.0-20	---	7.4-8.4	15-25	0	0	0
	9-13	7.0-15	---	7.4-8.4	20-50	0	0	0
	13-31	7.0-15	---	7.4-8.4	20-50	0	0	0
	31-35	4.0-10	---	7.4-8.4	40-70	0	0.0-2.0	0-5
	35-45	---	---	---	---	---	---	---
Ireland-----	0-8	8.0-20	---	6.6-7.8	0	0	0	0
	8-28	8.0-20	---	7.4-8.4	5-25	0	0.0-2.0	0
	28-38	---	---	---	---	---	---	---
18:								
Cedarhill-----	0-7	6.0-15	---	7.4-7.8	10-15	0	0	0
	7-12	6.0-15	---	7.4-8.4	15-35	0	0	0
	12-27	4.0-10	---	7.4-8.4	15-35	0	0	0
	27-60	4.0-10	---	7.9-8.4	15-35	0	0	0
19:								
Cedarhill-----	0-7	6.0-15	---	7.4-7.8	10-15	0	0	0
	7-12	6.0-15	---	7.4-8.4	15-35	0	0	0
	12-27	4.0-10	---	7.4-8.4	15-35	0	0	0
	27-60	4.0-10	---	7.9-8.4	15-35	0	0	0
20:								
Cedarhill-----	0-7	6.0-15	---	7.4-7.8	10-15	0	0	0
	7-12	6.0-15	---	7.4-8.4	15-35	0	0	0
	12-27	4.0-10	---	7.4-8.4	15-35	0	0	0
	27-60	4.0-10	---	7.9-8.4	15-35	0	0	0
Hymas-----	0-2	10-15	---	6.6-8.4	5-15	0	0	0
	2-7	6.0-15	---	7.4-8.4	10-45	0	0	0
	7-11	5.0-15	---	7.4-9.0	40-50	0	0.0-2.0	0-5
	11-21	---	---	---	---	---	---	---

Table 15.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
21:								
Cedarhill-----	0-7	6.0-15	---	7.4-7.8	10-15	0	0	0
	7-12	6.0-15	---	7.4-8.4	15-35	0	0	0
	12-27	4.0-10	---	7.4-8.4	15-35	0	0	0
	27-60	4.0-10	---	7.9-8.4	15-35	0	0	0
Lostine-----	0-7	12-20	---	6.1-7.8	0	0	0	0
	7-45	8.0-18	---	6.6-7.8	0	0	0	0
	45-60	8.0-20	---	6.6-7.8	0	0	0	0
22:								
Collinston-----	0-12	10-20	---	7.4-9.0	10-20	0	0	0-5
	12-20	10-25	---	7.4-9.0	30-40	0	0.0-2.0	0-5
	20-60	10-15	---	7.4-9.0	15-30	0	0.0-2.0	0-5
23:								
Collinston-----	0-12	10-20	---	7.4-9.0	10-20	0	0	0-5
	12-20	10-25	---	7.4-9.0	30-40	0	0.0-2.0	0-5
	20-60	10-15	---	7.4-9.0	15-30	0	0.0-2.0	0-5
Kearns-----	0-8	10-20	---	7.4-8.4	0	0	0	0
	8-32	10-20	---	7.4-8.4	0-5	0	0	0
	32-67	5.0-15	---	7.9-9.0	5-25	0	0.0-2.0	0-5
24:								
Copenhagen-----	0-6	10-20	---	6.6-7.8	0-5	0	0	0
	6-14	10-20	---	6.6-7.8	0-5	0	0	0
	14-24	---	---	---	---	---	---	---
Lonigan-----	0-11	30-40	---	7.4-8.4	0	0	0	0
	11-16	10-40	---	7.4-8.4	5-15	0	0	0
	16-33	5.0-40	---	7.4-8.4	15-35	0	2.0-4.0	0
	33-43	---	---	---	---	---	---	---
Manila-----	0-5	20-35	---	6.1-7.3	0	0	0	0
	5-19	30-60	---	6.1-7.8	0-15	0	0	0
	19-45	30-60	---	6.1-7.8	0-15	0	0	0
	45-60	10-20	---	6.6-8.4	10-25	0	0	0
25:								
Darkbull-----	0-10	5.0-13	---	7.9-9.0	0-15	0	0.0-2.0	0-5
	10-43	3.0-10	---	8.5-9.0	10-25	0	2.0-4.0	10-30
	43-60	3.0-10	---	8.5-9.0	10-25	0	2.0-4.0	5-13
Pyrat-----	0-14	7.0-15	---	7.9-9.0	5-10	0	0.0-2.0	0
	14-25	4.0-13	---	7.9-9.0	10-30	0	0.0-2.0	0
	25-33	4.0-13	---	7.9-9.0	10-30	0	0.0-2.0	0
	33-43	4.0-13	---	7.9-9.0	10-30	0	0.0-2.0	0
	43-65	2.0-7.0	---	8.5-9.6	10-30	0	2.0-4.0	0
Ecur-----	0-15	7.0-15	---	7.9-9.0	20-35	0	0.0-4.0	0-13
	15-37	3.0-15	---	8.5-11.0	30-45	0	0.0-2.0	13-30
	37-44	1.0-5.0	---	8.5-11.0	20-35	0-3	0.0-2.0	13-30
	44-49	2.0-7.0	---	8.5-11.0	20-35	0-3	0.0-2.0	13-30
	49-60	1.0-5.0	---	8.5-11.0	20-35	0-3	0.0-2.0	13-30
26:								
DeJarnet-----	0-3	10-25	---	6.6-7.8	0	0	0	0
	3-27	10-25	---	7.4-8.4	0	0	0	0
	27-41	10-20	---	7.4-8.4	5-15	0	0	0
	41-62	8.0-10	---	7.4-9.0	10-25	0	0	0

Table 15.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
27: Dumps, mine-----	---	---	---	---	---	---	---	---
28: Ecur-----	0-15	7.0-15	---	7.9-9.0	20-35	0	0.0-4.0	0-13
	15-37	3.0-15	---	8.5-11.0	30-45	0	0.0-2.0	13-30
	37-44	1.0-5.0	---	8.5-11.0	20-35	0-3	0.0-2.0	13-30
	44-49	2.0-7.0	---	8.5-11.0	20-35	0-3	0.0-2.0	13-30
	49-60	1.0-5.0	---	8.5-11.0	20-35	0-3	0.0-2.0	13-30
29: Ecur-----	0-15	7.0-15	---	7.9-9.0	20-35	0	0.0-4.0	0-13
	15-37	3.0-15	---	8.5-11.0	30-45	0	0.0-2.0	13-30
	37-44	1.0-5.0	---	8.5-11.0	20-35	0-3	0.0-2.0	13-30
	44-49	2.0-7.0	---	8.5-11.0	20-35	0-3	0.0-2.0	13-30
	49-60	1.0-5.0	---	8.5-11.0	20-35	0-3	0.0-2.0	13-30
Darkbull-----	0-10	5.0-13	---	7.9-9.0	0-15	0	0.0-2.0	0-5
	10-43	3.0-10	---	8.5-9.0	10-25	0	2.0-4.0	10-30
	43-60	3.0-10	---	8.5-9.0	10-25	0	2.0-4.0	5-13
30: Elevator-----	0-10	12-25	---	7.4-7.8	0	0	0.0-2.0	0
	10-32	18-30	---	7.4-8.4	0-5	0	0.0-2.0	0-5
	32-60	15-25	---	7.9-8.4	15-35	0	0.0-2.0	0-5
31: Elevator-----	0-10	12-25	---	7.4-7.8	0	0	0.0-2.0	0
	10-32	18-30	---	7.4-8.4	0-5	0	0.0-2.0	0-5
	32-60	15-25	---	7.9-8.4	15-35	0	0.0-2.0	0-5
Jensen-----	0-12	10-20	---	6.6-7.8	0	0	0	0
	12-45	9.0-20	---	7.4-8.4	0-10	0	0	0
	45-60	7.0-15	---	7.4-8.4	5-15	0	0	0
32: Elevator-----	0-10	12-25	---	7.4-7.8	0	0	0.0-2.0	0
	10-32	18-30	---	7.4-8.4	0-5	0	0.0-2.0	0-5
	32-60	15-25	---	7.9-8.4	15-35	0	0.0-2.0	0-5
Jensen-----	0-12	10-20	---	6.6-7.8	0	0	0	0
	12-45	9.0-20	---	7.4-8.4	0-10	0	0	0
	45-60	7.0-15	---	7.4-8.4	5-15	0	0	0
33: Fridlo-----	0-7	15-25	---	7.9-8.4	0-5	0	2.0-4.0	0-5
	7-24	20-30	---	7.9-9.0	0-10	0	4.0-8.0	15-25
	24-39	15-25	---	7.9-9.0	15-25	0	4.0-16.0	10-30
	39-60	10-20	---	7.9-9.0	20-35	0	8.0-16.0	10-20
34: Goosenawt-----	0-24	10-20	---	7.4-8.4	0	0	0	0
	24-58	15-25	---	7.4-7.8	0-5	0	0	0
	58-64	10-20	---	7.4-8.4	0-5	0	0	0
	64-74	10-20	---	7.4-8.4	0-5	0	0	0
35: Hans-----	0-10	10-20	---	7.4-8.4	0	0	0	0
	10-26	15-25	---	7.4-8.4	0-5	0	0	0
	26-60	10-25	---	7.9-9.0	15-25	0	0.0-2.0	0-5

Table 15.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
36:								
Highcreek-----	0-7	10-25	---	7.4-8.4	0	0	0	0
	7-26	10-20	---	7.4-8.4	0-10	0	0	0
	26-66	10-20	---	7.4-8.4	10-30	0	0	0
Sterling-----	0-13	8.0-20	---	7.4-8.4	5-15	0	0	0-5
	13-66	6.0-20	---	7.4-8.4	10-40	0	0	0-5
37:								
Highcreek-----	0-7	10-25	---	7.4-8.4	0	0	0	0
	7-26	10-20	---	7.4-8.4	0-10	0	0	0
	26-66	10-20	---	7.4-8.4	10-30	0	0	0
Sterling-----	0-13	8.0-20	---	7.4-8.4	5-15	0	0	0-5
	13-66	6.0-20	---	7.4-8.4	10-40	0	0	0-5
38:								
Hillfield-----	0-7	6.0-15	---	7.4-8.4	5-10	0	0	0
	7-16	6.0-15	---	7.4-8.4	15-30	0	0	0
	16-60	4.0-10	---	7.4-8.4	10-25	0	0	0
Kucera-----	0-22	8.0-20	---	6.6-8.4	0	0	0	0
	22-42	6.0-15	---	6.6-8.4	0-10	0	0	0
	42-60	5.0-10	---	7.4-9.0	5-15	0	0.0-2.0	0
39:								
Hillfield-----	0-7	6.0-15	---	7.4-8.4	5-10	0	0	0
	7-16	6.0-15	---	7.4-8.4	15-30	0	0	0
	16-60	4.0-10	---	7.4-8.4	10-25	0	0	0
Kucera-----	0-22	8.0-20	---	6.6-8.4	0	0	0	0
	22-42	6.0-15	---	6.6-8.4	0-10	0	0	0
	42-60	5.0-10	---	7.4-9.0	5-15	0	0.0-2.0	0
40:								
Hondoho-----	0-14	9.0-20	---	6.6-7.8	0	0	0	0
	14-28	8.0-20	---	7.4-8.4	5-30	0	0	0
	28-60	3.0-20	---	7.4-8.4	15-40	0	0	0
Calpac-----	0-8	10-20	---	6.6-7.3	0	0	0	0
	8-15	8.0-20	---	6.6-7.3	0	0	0	0
	15-23	9.0-20	---	7.4-7.8	0	0	0	0
	23-60	9.0-20	---	7.4-8.4	5-14	0	0.0-2.0	0
Lizdale-----	0-7	8.0-20	---	7.4-7.8	5-15	0	0	0
	7-10	6.0-20	---	7.4-9.0	25-60	0	0	0-5
	10-36	6.0-20	---	7.4-9.0	25-60	0	0	0-5
	36-52	5.0-15	---	7.4-9.0	20-45	0	0	0-5
	52-60	5.0-15	---	7.4-9.0	20-45	0	0.0-4.0	0-5
41:								
Hondoho-----	0-14	9.0-20	---	6.6-7.8	0	0	0	0
	14-28	8.0-20	---	7.4-8.4	5-30	0	0	0
	28-60	3.0-20	---	7.4-8.4	15-40	0	0	0
Hymas-----	0-2	10-15	---	6.6-8.4	5-15	0	0	0
	2-7	6.0-15	---	7.4-8.4	10-45	0	0	0
	7-11	5.0-15	---	7.4-9.0	40-50	0	0.0-2.0	0-5
	11-21	---	---	---	---	---	---	---

Table 15.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
41: Pavohroo-----	0-1	---	20-30	4.5-5.5	0	0	0	0
	1-7	10-25	---	6.1-7.3	0	0	0	0
	7-16	15-25	---	6.1-7.3	0	0	0	0
	16-39	15-25	---	6.1-7.3	0	0	0	0
	39-61	20-25	---	6.6-8.4	0-5	0	0.0-2.0	0
42: Hondoho-----	0-14	9.0-20	---	6.6-7.8	0	0	0	0
	14-28	8.0-20	---	7.4-8.4	5-30	0	0	0
	28-60	3.0-20	---	7.4-8.4	15-40	0	0	0
Hymas-----	0-2	10-15	---	6.6-8.4	5-15	0	0	0
	2-7	6.0-15	---	7.4-8.4	10-45	0	0	0
	7-11	5.0-15	---	7.4-9.0	40-50	0	0.0-2.0	0-5
	11-21	---	---	---	---	---	---	---
Pavohroo-----	0-1	---	20-30	4.5-5.5	0	0	0	0
	1-7	10-25	---	6.1-7.3	0	0	0	0
	7-16	15-25	---	6.1-7.3	0	0	0	0
	16-39	15-25	---	6.1-7.3	0	0	0	0
	39-61	20-25	---	6.6-8.4	0-5	0	0.0-2.0	0
43: Hondoho-----	0-14	9.0-20	---	6.6-7.8	0	0	0	0
	14-28	8.0-20	---	7.4-8.4	5-30	0	0	0
	28-60	3.0-20	---	7.4-8.4	15-40	0	0	0
Ridgecrest-----	0-9	9.0-20	---	7.4-8.4	15-25	0	0	0
	9-13	7.0-15	---	7.4-8.4	20-50	0	0	0
	13-31	7.0-15	---	7.4-8.4	20-50	0	0	0
	31-35	4.0-10	---	7.4-8.4	40-70	0	0.0-2.0	0-5
	35-45	---	---	---	---	---	---	---
Hades-----	0-20	10-20	---	6.6-7.3	0	0	0	0
	20-42	20-30	---	6.6-7.8	0	0	0	0
	42-60	15-25	---	6.6-7.8	0-5	0	0	0
44: Hutchley-----	0-6	10-20	---	6.6-7.8	0	0	0	0
	6-13	10-25	---	6.6-7.8	0	0	0	0
	13-23	---	---	---	---	---	---	---
McCarey-----	0-8	11-25	---	6.6-7.8	0	0	0	0
	8-15	12-30	---	6.6-7.8	0	0	0	0
	15-19	12-30	---	6.6-7.8	5-10	0	0	0
	19-23	9.0-25	---	7.4-7.8	15-25	0	0	0
	23-33	---	---	---	---	---	---	---
Araveton-----	0-8	10-25	---	6.6-7.8	0	0	0	0
	8-36	10-20	---	7.4-7.8	0-20	0	0.0-2.0	0
	36-62	10-15	---	7.4-8.4	15-35	0	0.0-2.0	0-5
45: Hymas-----	0-2	10-15	---	6.6-8.4	5-15	0	0	0
	2-7	6.0-15	---	7.4-8.4	10-45	0	0	0
	7-11	5.0-15	---	7.4-9.0	40-50	0	0.0-2.0	0-5
	11-21	---	---	---	---	---	---	---

Table 15.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
45:								
Calpac-----	0-8	10-20	---	6.6-7.3	0	0	0	0
	8-15	8.0-20	---	6.6-7.3	0	0	0	0
	15-23	9.0-20	---	7.4-7.8	0	0	0	0
	23-60	9.0-20	---	7.4-8.4	5-14	0	0.0-2.0	0
Ireland-----	0-8	8.0-20	---	6.6-7.8	0	0	0	0
	8-28	8.0-20	---	7.4-8.4	5-25	0	0.0-2.0	0
	28-38	---	---	---	---	---	---	---
46:								
Hymas-----	0-2	10-15	---	6.6-8.4	5-15	0	0	0
	2-7	6.0-15	---	7.4-8.4	10-45	0	0	0
	7-11	5.0-15	---	7.4-9.0	40-50	0	0.0-2.0	0-5
	11-21	---	---	---	---	---	---	---
Northwater-----	0-2	---	20-30	4.5-5.5	0	0	0	0
	2-20	10-20	---	6.6-7.8	0	0	0	0
	20-31	8.0-20	---	6.6-7.8	0	0	0	0
	31-37	8.0-20	---	6.6-7.8	0	0	0	0
	37-62	8.0-20	---	6.6-7.8	0	0	0	0
Clayburn-----	0-4	8.0-20	---	6.6-7.3	0	0	0	0
	4-21	6.0-20	---	6.6-7.3	0	0	0	0
	21-39	13-25	---	6.6-7.3	0	0	0	0
	39-60	13-25	---	6.6-7.3	0	0	0	0
47:								
Hymas-----	0-2	10-15	---	6.6-8.4	5-15	0	0	0
	2-7	6.0-15	---	7.4-8.4	10-45	0	0	0
	7-11	5.0-15	---	7.4-9.0	40-50	0	0.0-2.0	0-5
	11-21	---	---	---	---	---	---	---
Povey-----	0-5	12-30	---	6.1-7.3	0	0	0	0
	5-12	10-25	---	6.1-7.3	0	0	0	0
	12-20	10-25	---	6.1-7.3	0	0	0	0
	20-35	10-25	---	6.1-7.3	0	0	0	0
	35-60	4.0-15	---	6.1-7.3	0	0	0	0
48:								
Hymas-----	0-2	10-15	---	6.6-8.4	5-15	0	0	0
	2-7	6.0-15	---	7.4-8.4	10-45	0	0	0
	7-11	5.0-15	---	7.4-9.0	40-50	0	0.0-2.0	0-5
	11-21	---	---	---	---	---	---	---
Povey-----	0-5	12-30	---	6.1-7.3	0	0	0	0
	5-12	10-25	---	6.1-7.3	0	0	0	0
	12-20	10-25	---	6.1-7.3	0	0	0	0
	20-35	10-25	---	6.1-7.3	0	0	0	0
	35-60	4.0-15	---	6.1-7.3	0	0	0	0
Pavohroo-----	0-1	---	20-30	4.5-5.5	0	0	0	0
	1-7	10-25	---	6.1-7.3	0	0	0	0
	7-16	15-25	---	6.1-7.3	0	0	0	0
	16-39	15-25	---	6.1-7.3	0	0	0	0
	39-61	20-25	---	6.6-8.4	0-5	0	0.0-2.0	0
49:								
Inkom-----	0-6	11-25	---	7.4-8.4	20-35	0	0.0-4.0	0-5
	6-32	11-25	---	7.4-8.4	20-45	0	0.0-4.0	0-5
	32-60	11-25	---	7.4-8.4	20-45	0	0.0-4.0	0-5

Table 15.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
50:								
Iphil-----	0-10	7.0-15	---	7.4-9.0	5-15	0	0.0-2.0	0
	10-36	6.0-15	---	7.4-9.0	15-35	0	0.0-2.0	0-8
	36-60	6.0-15	---	7.4-9.0	10-15	0	0.0-2.0	5-15
Ririe-----	0-14	10-20	---	6.6-8.4	0	0	0	0
	14-63	7.0-15	---	7.4-9.0	15-35	0	0.0-2.0	5-15
Watercanyon-----	0-5	6.0-15	---	7.4-7.8	5-15	0	0.0-2.0	0-5
	5-33	3.0-10	---	7.9-9.0	15-35	0	2.0-4.0	2-10
	33-62	3.0-10	---	7.9-9.0	15-35	0	2.0-4.0	2-10
51:								
Ireland-----	0-8	8.0-20	---	6.6-7.8	0	0	0	0
	8-28	8.0-20	---	7.4-8.4	5-25	0	0.0-2.0	0
	28-38	---	---	---	---	---	---	---
Calpac-----	0-8	10-20	---	6.6-7.3	0	0	0	0
	8-15	8.0-20	---	6.6-7.3	0	0	0	0
	15-23	9.0-20	---	7.4-7.8	0	0	0	0
	23-60	9.0-20	---	7.4-8.4	5-14	0	0.0-2.0	0
52:								
Jensen-----	0-12	10-20	---	6.6-7.8	0	0	0	0
	12-45	9.0-20	---	7.4-8.4	0-10	0	0	0
	45-60	7.0-15	---	7.4-8.4	5-15	0	0	0
53:								
Jensen-----	0-12	10-20	---	6.6-7.8	0	0	0	0
	12-45	9.0-20	---	7.4-8.4	0-10	0	0	0
	45-60	7.0-15	---	7.4-8.4	5-15	0	0	0
54:								
Jensen-----	0-12	10-20	---	6.6-7.8	0	0	0	0
	12-45	9.0-20	---	7.4-8.4	0-10	0	0	0
	45-60	7.0-15	---	7.4-8.4	5-15	0	0	0
Iphil-----	0-10	7.0-15	---	7.4-9.0	5-15	0	0.0-2.0	0
	10-36	6.0-15	---	7.4-9.0	15-35	0	0.0-2.0	0-8
	36-60	6.0-15	---	7.4-9.0	10-15	0	0.0-2.0	5-15
Wursten-----	0-14	7.0-15	---	7.4-8.4	5-15	0	0.0-2.0	0
	14-60	6.0-10	---	7.9-9.0	10-30	0	2.0-4.0	5-12
55:								
Jovine-----	0-7	10-20	---	6.6-7.8	0	0	0	0
	7-60	10-30	---	6.6-7.8	0	0	0	0
56:								
Justesen-----	0-8	7.0-20	---	6.6-7.3	0	0	0	0
	8-16	10-30	---	6.6-7.3	0	0	0	0
	16-27	10-30	---	6.6-7.8	0	0	0	0
	27-45	8.0-20	---	7.4-8.4	5-20	0	0	0
	45-60	8.0-20	---	7.4-8.4	5-20	0	0	0
57:								
Justesen-----	0-8	7.0-20	---	6.6-7.3	0	0	0	0
	8-16	10-30	---	6.6-7.3	0	0	0	0
	16-27	10-30	---	6.6-7.8	0	0	0	0
	27-45	8.0-20	---	7.4-8.4	5-20	0	0	0
	45-60	8.0-20	---	7.4-8.4	5-20	0	0	0

Table 15.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
58:								
Justesen-----	0-8	7.0-20	---	6.6-7.3	0	0	0	0
	8-16	10-30	---	6.6-7.3	0	0	0	0
	16-27	10-30	---	6.6-7.8	0	0	0	0
	27-45	8.0-20	---	7.4-8.4	5-20	0	0	0
	45-60	8.0-20	---	7.4-8.4	5-20	0	0	0
Ririe-----	0-14	10-20	---	6.6-8.4	0	0	0	0
	14-63	7.0-15	---	7.4-9.0	15-35	0	0.0-2.0	5-15
Buist-----	0-15	5.0-15	---	7.4-7.8	0	0	0.0-2.0	0-5
	15-28	8.0-20	---	7.9-8.4	15-40	0	0.0-2.0	0-5
	28-60	8.0-20	---	7.9-8.4	15-40	0	0.0-2.0	0-5
59:								
Kearns-----	0-8	10-20	---	7.4-8.4	0	0	0	0
	8-32	10-20	---	7.4-8.4	0-5	0	0	0
	32-67	5.0-15	---	7.9-9.0	5-25	0	0.0-2.0	0-5
60:								
Kearns-----	0-8	10-20	---	7.4-8.4	0	0	0	0
	8-32	10-20	---	7.4-8.4	0-5	0	0	0
	32-67	5.0-15	---	7.9-9.0	5-25	0	0.0-2.0	0-5
61:								
Kidman-----	0-17	5.0-15	---	6.6-7.8	0	0	0	0
	17-38	5.0-15	---	6.6-7.8	0	0	0	0
	38-66	5.0-15	---	7.9-9.0	15-30	0	0.0-2.0	3-8
62:								
Kidman-----	0-17	5.0-15	---	6.6-7.8	0	0	0	0
	17-38	5.0-15	---	6.6-7.8	0	0	0	0
	38-66	5.0-15	---	7.9-9.0	15-30	0	0.0-2.0	3-8
Preston-----	0-3	2.0-7.0	---	6.6-7.8	0	0	0.0-2.0	0-10
	3-65	1.0-5.0	---	6.6-7.8	0-15	0	0.0-2.0	0-10
63:								
Kucera-----	0-22	8.0-20	---	6.6-8.4	0	0	0	0
	22-42	6.0-15	---	6.6-8.4	0-10	0	0	0
	42-60	5.0-10	---	7.4-9.0	5-15	0	0.0-2.0	0
64:								
Lagonot-----	0-10	10-20	---	7.4-9.0	5-15	0	0	0-5
	10-60	10-20	---	8.5-9.5	15-35	0	2.0-4.0	5-10
65:								
Langless-----	0-3	---	20-30	4.5-5.5	0	0	0	0
	3-9	1.0-20	---	7.9-9.0	20-40	0	4.0-8.0	10-15
	9-47	8.0-20	---	7.9-9.0	40-65	0	4.0-8.0	10-15
	47-63	7.0-15	---	7.9-8.4	15-35	0	4.0-8.0	5-10
66:								
Langless-----	0-3	---	20-30	4.5-5.5	0	0	0	0
	3-9	1.0-20	---	7.9-9.0	20-40	0	4.0-8.0	10-15
	9-47	8.0-20	---	7.9-9.0	40-65	0	4.0-8.0	10-15
	47-63	7.0-15	---	7.9-8.4	15-35	0	4.0-8.0	5-10
Logan-----	0-4	---	20-30	4.5-5.5	0	0	0	0
	4-22	15-30	---	7.9-9.0	5-20	0	0.0-2.0	5-15
	22-64	10-25	---	7.9-9.0	15-35	0	0.0-2.0	5-15

Table 15.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
67: Lanoak-----	0-30	10-20	---	6.1-7.8	0	0	0	0
	30-49	10-20	---	6.1-7.8	0	0	0	0
	49-60	10-25	---	6.6-8.4	0-15	0	0	0
68: Lanoak-----	0-30	10-20	---	6.1-7.8	0	0	0	0
	30-49	10-20	---	6.1-7.8	0	0	0	0
	49-60	10-25	---	6.6-8.4	0-15	0	0	0
69: Lanoak-----	0-30	10-20	---	6.1-7.8	0	0	0	0
	30-49	10-20	---	6.1-7.8	0	0	0	0
	49-60	10-25	---	6.6-8.4	0-15	0	0	0
Hondoho-----	0-14	9.0-20	---	6.6-7.8	0	0	0	0
	14-28	8.0-20	---	7.4-8.4	5-30	0	0	0
	28-60	3.0-20	---	7.4-8.4	15-40	0	0	0
70: Logan-----	0-4	---	20-30	4.5-5.5	0	0	0	0
	4-22	15-30	---	7.9-9.0	5-20	0	0.0-2.0	5-15
	22-64	10-25	---	7.9-9.0	15-35	0	0.0-2.0	5-15
71: Lonigan-----	0-11	30-40	---	7.4-8.4	0	0	0	0
	11-16	10-40	---	7.4-8.4	5-15	0	0	0
	16-33	5.0-40	---	7.4-8.4	15-35	0	2.0-4.0	0
	33-43	---	---	---	---	---	---	---
Lizdale-----	0-7	8.0-20	---	7.4-7.8	5-15	0	0	0
	7-10	6.0-20	---	7.4-9.0	25-60	0	0	0-5
	10-36	6.0-20	---	7.4-9.0	25-60	0	0	0-5
	36-52	5.0-15	---	7.4-9.0	20-45	0	0	0-5
	52-60	5.0-15	---	7.4-9.0	20-45	0	0.0-4.0	0-5
72: Lostine-----	0-7	12-20	---	6.1-7.8	0	0	0	0
	7-45	8.0-18	---	6.6-7.8	0	0	0	0
	45-60	8.0-20	---	6.6-7.8	0	0	0	0
73: Manila-----	0-5	20-35	---	6.1-7.3	0	0	0	0
	5-19	30-60	---	6.1-7.8	0-15	0	0	0
	19-45	30-60	---	6.1-7.8	0-15	0	0	0
	45-60	10-20	---	6.6-8.4	10-25	0	0	0
74: Manila-----	0-5	20-35	---	6.1-7.3	0	0	0	0
	5-19	30-60	---	6.1-7.8	0-15	0	0	0
	19-45	30-60	---	6.1-7.8	0-15	0	0	0
	45-60	10-20	---	6.6-8.4	10-25	0	0	0
Broadhead-----	0-9	11-25	---	6.6-7.3	0	0	0	0
	9-15	25-40	---	6.6-7.8	0	0	0	0
	15-36	25-40	---	6.6-7.8	0	0	0	0
	36-41	25-40	---	6.6-7.8	0	0	0	0
	41-60	25-40	---	6.6-7.8	0-5	0	0	0

Table 15.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
75:								
Manila-----	0-5	20-35	---	6.1-7.3	0	0	0	0
	5-19	30-60	---	6.1-7.8	0-15	0	0	0
	19-45	30-60	---	6.1-7.8	0-15	0	0	0
	45-60	10-20	---	6.6-8.4	10-25	0	0	0
Broadhead-----	0-9	11-25	---	6.6-7.3	0	0	0	0
	9-15	25-40	---	6.6-7.8	0	0	0	0
	15-36	25-40	---	6.6-7.8	0	0	0	0
	36-41	25-40	---	6.6-7.8	0	0	0	0
	41-60	25-40	---	6.6-7.8	0-5	0	0	0
76:								
Manila-----	0-5	20-35	---	6.1-7.3	0	0	0	0
	5-19	30-60	---	6.1-7.8	0-15	0	0	0
	19-45	30-60	---	6.1-7.8	0-15	0	0	0
	45-60	10-20	---	6.6-8.4	10-25	0	0	0
Lonigan-----	0-11	30-40	---	7.4-8.4	0	0	0	0
	11-16	10-40	---	7.4-8.4	5-15	0	0	0
	16-33	5.0-40	---	7.4-8.4	15-35	0	2.0-4.0	0
	33-43	---	---	---	---	---	---	---
77:								
Manila-----	0-5	20-35	---	6.1-7.3	0	0	0	0
	5-19	30-60	---	6.1-7.8	0-15	0	0	0
	19-45	30-60	---	6.1-7.8	0-15	0	0	0
	45-60	10-20	---	6.6-8.4	10-25	0	0	0
Obnot-----	0-5	15-30	---	6.1-7.3	0	0	0	0
	5-31	20-40	---	6.1-7.8	0-10	0	0	0
	31-34	20-40	---	6.1-7.8	0-10	0	0	0
	34-60	15-30	---	7.4-8.4	5-15	0	0	0
78:								
Manila-----	0-5	20-35	---	6.1-7.3	0	0	0	0
	5-19	30-60	---	6.1-7.8	0-15	0	0	0
	19-45	30-60	---	6.1-7.8	0-15	0	0	0
	45-60	10-20	---	6.6-8.4	10-25	0	0	0
Yago-----	0-10	20-30	---	6.1-7.3	0	0	0	0
	10-40	20-35	---	6.1-7.3	0-10	0	0	0
	40-60	10-30	---	6.6-7.8	15-25	0	0	0
79:								
Manila-----	0-5	20-35	---	6.1-7.3	0	0	0	0
	5-19	30-60	---	6.1-7.8	0-15	0	0	0
	19-45	30-60	---	6.1-7.8	0-15	0	0	0
	45-60	10-20	---	6.6-8.4	10-25	0	0	0
Yago-----	0-10	20-30	---	6.1-7.3	0	0	0	0
	10-40	20-35	---	6.1-7.3	0-10	0	0	0
	40-60	10-30	---	6.6-7.8	15-25	0	0	0
80:								
Mellor-----	0-4	10-15	---	7.9-9.0	0-5	0	2.0-8.0	0-5
	4-16	15-25	---	8.5-9.0	10-15	0	8.0-16.0	15-25
	16-60	5.0-20	---	8.5-9.0	15-25	0	8.0-16.0	10-20
Freedom-----	0-13	10-20	---	7.4-9.0	5-30	0	0.0-2.0	0-5
	13-34	10-20	---	7.9-9.0	15-40	0	2.0-4.0	5-13
	34-60	5.0-25	---	7.4-9.0	10-30	0	0.0-2.0	5-13

Table 15.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
81: Neeley-----	0-7	4.0-14	---	7.4-8.4	0	0	0.0-2.0	0
	7-14	4.0-15	---	7.9-9.0	0-30	0	0.0-2.0	5-20
	14-65	3.0-10	---	8.5-9.0	15-30	0	0.0-4.0	10-20
82: Northwater-----	0-2	---	20-30	4.5-5.5	0	0	0	0
	2-20	10-20	---	6.6-7.8	0	0	0	0
	20-31	8.0-20	---	6.6-7.8	0	0	0	0
	31-37	8.0-20	---	6.6-7.8	0	0	0	0
	37-62	8.0-20	---	6.6-7.8	0	0	0	0
Povey-----	0-5	12-30	---	6.1-7.3	0	0	0	0
	5-12	10-25	---	6.1-7.3	0	0	0	0
	12-20	10-25	---	6.1-7.3	0	0	0	0
	20-35	10-25	---	6.1-7.3	0	0	0	0
	35-60	4.0-15	---	6.1-7.3	0	0	0	0
Pavohroo-----	0-1	---	20-30	4.5-5.5	0	0	0	0
	1-7	10-25	---	6.1-7.3	0	0	0	0
	7-16	15-25	---	6.1-7.3	0	0	0	0
	16-39	15-25	---	6.1-7.3	0	0	0	0
	39-61	20-25	---	6.6-8.4	0-5	0	0.0-2.0	0
83: Parehat-----	0-6	6.0-20	---	7.4-8.4	5-15	0	2.0-4.0	45-55
	6-52	8.0-15	---	7.4-8.4	10-15	0	2.0-4.0	45-55
	52-64	9.0-20	---	7.9-9.0	0-15	0	2.0-4.0	40-50
84: Parleys-----	0-5	10-25	---	6.6-7.8	0	0	0.0-2.0	0
	5-26	10-30	---	6.6-8.4	0	0	0.0-2.0	0
	26-64	10-20	---	7.9-9.0	15-40	0	0.0-2.0	0-5
85: Parleys-----	0-5	10-25	---	6.6-7.8	0	0	0.0-2.0	0
	5-26	10-30	---	6.6-8.4	0	0	0.0-2.0	0
	26-64	10-20	---	7.9-9.0	15-40	0	0.0-2.0	0-5
86: Parleys-----	0-5	10-25	---	6.6-7.8	0	0	0.0-2.0	0
	5-26	10-30	---	6.6-8.4	0	0	0.0-2.0	0
	26-64	10-20	---	7.9-9.0	15-40	0	0.0-2.0	0-5
Welby-----	0-11	8.0-15	---	7.9-9.0	5-20	0	0.0-2.0	5-15
	11-36	6.0-15	---	7.9-9.0	15-35	0	0.0-2.0	5-20
	36-60	3.0-13	---	7.9-9.0	10-30	0	0.0-2.0	5-20
87: Parleys-----	0-5	10-25	---	6.6-7.8	0	0	0.0-2.0	0
	5-26	10-30	---	6.6-8.4	0	0	0.0-2.0	0
	26-64	10-20	---	7.9-9.0	15-40	0	0.0-2.0	0-5
Wheelon-----	0-8	10-20	---	7.4-8.4	12-20	0	0.0-2.0	0
	8-14	10-20	---	7.9-9.0	20-35	0	0.0-2.0	0-15
	14-20	10-20	---	7.9-9.0	20-35	0	0.0-2.0	0-15
	20-45	10-20	---	7.9-9.0	20-35	0	0.0-2.0	0-15
	45-60	10-20	---	7.9-9.0	10-30	0	0.0-2.0	5-20

Table 15.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
88:								
Pavohroo-----	0-1	---	20-30	4.5-5.5	0	0	0	0
	1-7	10-25	---	6.1-7.3	0	0	0	0
	7-16	15-25	---	6.1-7.3	0	0	0	0
	16-39	15-25	---	6.1-7.3	0	0	0	0
	39-61	20-25	---	6.6-8.4	0-5	0	0.0-2.0	0
Povey-----	0-5	12-30	---	6.1-7.3	0	0	0	0
	5-12	10-25	---	6.1-7.3	0	0	0	0
	12-20	10-25	---	6.1-7.3	0	0	0	0
	20-35	10-25	---	6.1-7.3	0	0	0	0
	35-60	4.0-15	---	6.1-7.3	0	0	0	0
89:								
Pavohroo-----	0-1	---	20-30	4.5-5.5	0	0	0	0
	1-7	10-25	---	6.1-7.3	0	0	0	0
	7-16	15-25	---	6.1-7.3	0	0	0	0
	16-39	15-25	---	6.1-7.3	0	0	0	0
	39-61	20-25	---	6.6-8.4	0-5	0	0.0-2.0	0
Stines-----	0-13	5.0-15	---	6.6-7.8	0-5	0	0	0
	13-24	5.0-15	---	6.6-7.8	5-10	0	0	0
	24-44	4.0-10	---	7.4-8.4	10-20	0	0	0
	44-60	3.0-10	---	7.4-8.4	5-15	0	0	0
Lonigan-----	0-11	30-40	---	7.4-8.4	0	0	0	0
	11-16	10-40	---	7.4-8.4	5-15	0	0	0
	16-33	5.0-40	---	7.4-8.4	15-35	0	2.0-4.0	0
	33-43	---	---	---	---	---	---	---
90:								
Pits, gravel-----	0-60	---	---	---	---	---	---	---
91:								
Povey-----	0-5	12-30	---	6.1-7.3	0	0	0	0
	5-12	10-25	---	6.1-7.3	0	0	0	0
	12-20	10-25	---	6.1-7.3	0	0	0	0
	20-35	10-25	---	6.1-7.3	0	0	0	0
	35-60	4.0-15	---	6.1-7.3	0	0	0	0
Hades-----	0-20	10-20	---	6.6-7.3	0	0	0	0
	20-42	20-30	---	6.6-7.8	0	0	0	0
	42-60	15-25	---	6.6-7.8	0-5	0	0	0
Hondoho-----	0-14	9.0-20	---	6.6-7.8	0	0	0	0
	14-28	8.0-20	---	7.4-8.4	5-30	0	0	0
	28-60	3.0-20	---	7.4-8.4	15-40	0	0	0
92:								
Povey-----	0-5	12-30	---	6.1-7.3	0	0	0	0
	5-12	10-25	---	6.1-7.3	0	0	0	0
	12-20	10-25	---	6.1-7.3	0	0	0	0
	20-35	10-25	---	6.1-7.3	0	0	0	0
	35-60	4.0-15	---	6.1-7.3	0	0	0	0
Ireland-----	0-8	8.0-20	---	6.6-7.8	0	0	0	0
	8-28	8.0-20	---	7.4-8.4	5-25	0	0.0-2.0	0
	28-38	---	---	---	---	---	---	---

Table 15.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	Inches	meq/100 g	meq/100 g	pH	Pct	Pct	mmhos/cm	
92: Calpac-----	0-8	10-20	---	6.6-7.3	0	0	0	0
	8-15	8.0-20	---	6.6-7.3	0	0	0	0
	15-23	9.0-20	---	7.4-7.8	0	0	0	0
	23-60	9.0-20	---	7.4-8.4	5-14	0	0.0-2.0	0
93: Povey-----	0-5	12-30	---	6.1-7.3	0	0	0	0
	5-12	10-25	---	6.1-7.3	0	0	0	0
	12-20	10-25	---	6.1-7.3	0	0	0	0
	20-35	10-25	---	6.1-7.3	0	0	0	0
	35-60	4.0-15	---	6.1-7.3	0	0	0	0
Pavohroo-----	0-1	---	20-30	4.5-5.5	0	0	0	0
	1-7	10-25	---	6.1-7.3	0	0	0	0
	7-16	15-25	---	6.1-7.3	0	0	0	0
	16-39	15-25	---	6.1-7.3	0	0	0	0
	39-61	20-25	---	6.6-8.4	0-5	0	0.0-2.0	0
94: Povirt-----	0-10	15-30	---	7.9-8.4	5-20	0	0.0-2.0	0-8
	10-20	15-30	---	7.9-8.4	5-20	0	0.0-2.0	0-8
	20-60	30-50	---	7.9-9.0	5-20	0	0.0-2.0	10-30
95: Raldridge-----	0-3	15-20	---	7.4-7.8	0	0	0	0
	3-14	15-25	---	7.4-7.8	0	0	0	0
	14-22	10-20	---	7.9-8.4	0	0	0	0
	22-60	7.0-15	---	7.9-8.4	15-25	0	0	0
96: Rexburg-----	0-14	7.0-15	---	6.1-7.8	0	0	0	0
	14-22	8.0-15	---	6.6-7.8	0	0	0	0
	22-60	5.0-10	---	7.4-8.4	15-30	0	0.0-2.0	0
97: Rexburg-----	0-14	7.0-15	---	6.1-7.8	0	0	0	0
	14-22	8.0-15	---	6.6-7.8	0	0	0	0
	22-60	5.0-10	---	7.4-8.4	15-30	0	0.0-2.0	0
Arbone-----	0-15	7.0-15	---	7.4-8.4	0	0	0	0
	15-60	6.0-13	---	7.4-8.4	5-30	0	0	0
Ririe-----	0-14	10-20	---	6.6-8.4	0	0	0	0
	14-63	7.0-15	---	7.4-9.0	15-35	0	0.0-2.0	5-15
98: Rexburg-----	0-14	7.0-15	---	6.1-7.8	0	0	0	0
	14-22	8.0-15	---	6.6-7.8	0	0	0	0
	22-60	5.0-10	---	7.4-8.4	15-30	0	0.0-2.0	0
Arbone-----	0-15	7.0-15	---	7.4-8.4	0	0	0	0
	15-60	6.0-13	---	7.4-8.4	5-30	0	0	0
Ririe-----	0-14	10-20	---	6.6-8.4	0	0	0	0
	14-63	7.0-15	---	7.4-9.0	15-35	0	0.0-2.0	5-15
99: Rexburg-----	0-14	7.0-15	---	6.1-7.8	0	0	0	0
	14-22	8.0-15	---	6.6-7.8	0	0	0	0
	22-60	5.0-10	---	7.4-8.4	15-30	0	0.0-2.0	0

Table 15.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
99:								
Iphil-----	0-10	7.0-15	---	7.4-9.0	5-15	0	0.0-2.0	0
	10-36	6.0-15	---	7.4-9.0	15-35	0	0.0-2.0	0-8
	36-60	6.0-15	---	7.4-9.0	10-15	0	0.0-2.0	5-15
Watercanyon-----	0-5	6.0-15	---	7.4-7.8	5-15	0	0.0-2.0	0-5
	5-33	3.0-10	---	7.9-9.0	15-35	0	2.0-4.0	2-10
	33-62	3.0-10	---	7.9-9.0	15-35	0	2.0-4.0	2-10
100:								
Rexburg-----	0-14	7.0-15	---	6.1-7.8	0	0	0	0
	14-22	8.0-15	---	6.6-7.8	0	0	0	0
	22-60	5.0-10	---	7.4-8.4	15-30	0	0.0-2.0	0
Lanoak-----	0-30	10-20	---	6.1-7.8	0	0	0	0
	30-49	10-20	---	6.1-7.8	0	0	0	0
	49-60	10-25	---	6.6-8.4	0-15	0	0	0
101:								
Rexburg-----	0-14	7.0-15	---	6.1-7.8	0	0	0	0
	14-22	8.0-15	---	6.6-7.8	0	0	0	0
	22-60	5.0-10	---	7.4-8.4	15-30	0	0.0-2.0	0
Lanoak-----	0-30	10-20	---	6.1-7.8	0	0	0	0
	30-49	10-20	---	6.1-7.8	0	0	0	0
	49-60	10-25	---	6.6-8.4	0-15	0	0	0
102:								
Rexburg-----	0-14	7.0-15	---	6.1-7.8	0	0	0	0
	14-22	8.0-15	---	6.6-7.8	0	0	0	0
	22-60	5.0-10	---	7.4-8.4	15-30	0	0.0-2.0	0
Lanoak-----	0-30	10-20	---	6.1-7.8	0	0	0	0
	30-49	10-20	---	6.1-7.8	0	0	0	0
	49-60	10-25	---	6.6-8.4	0-15	0	0	0
Watercanyon-----	0-5	6.0-15	---	7.4-7.8	5-15	0	0.0-2.0	0-5
	5-33	3.0-10	---	7.9-9.0	15-35	0	2.0-4.0	2-10
	33-62	3.0-10	---	7.9-9.0	15-35	0	2.0-4.0	2-10
103:								
Rexburg-----	0-14	7.0-15	---	6.1-7.8	0	0	0	0
	14-22	8.0-15	---	6.6-7.8	0	0	0	0
	22-60	5.0-10	---	7.4-8.4	15-30	0	0.0-2.0	0
Ririe-----	0-14	10-20	---	6.6-8.4	0	0	0	0
	14-60	7.0-15	---	7.4-9.0	15-35	0	0.0-2.0	5-15
Kucera-----	0-22	8.0-20	---	6.6-8.4	0	0	0	0
	22-42	6.0-15	---	6.6-8.4	0-10	0	0	0
	42-60	5.0-10	---	7.4-9.0	5-15	0	0.0-2.0	0
104:								
Rexburg-----	0-14	7.0-15	---	6.1-7.8	0	0	0	0
	14-22	8.0-15	---	6.6-7.8	0	0	0	0
	22-60	5.0-10	---	7.4-8.4	15-30	0	0.0-2.0	0
Thatcher-----	0-7	5.0-15	---	6.6-8.4	0	0	0.0-2.0	0
	7-35	11-21	---	6.6-8.4	0	0	0.0-2.0	0
	35-60	5.0-15	---	7.4-9.0	15-25	0	0.0-2.0	0

Table 15.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
104:								
Ririe-----	0-14	10-20	---	6.6-8.4	0	0	0	0
	14-60	7.0-15	---	7.4-9.0	15-35	0	0.0-2.0	5-15
105:								
Rexburg-----	0-14	7.0-15	---	6.1-7.8	0	0	0	0
	14-22	8.0-15	---	6.6-7.8	0	0	0	0
	22-60	5.0-10	---	7.4-8.4	15-30	0	0.0-2.0	0
Watercanyon-----	0-5	6.0-15	---	7.4-7.8	5-15	0	0.0-2.0	0-5
	5-33	3.0-10	---	7.9-9.0	15-35	0	2.0-4.0	2-10
	33-62	3.0-10	---	7.9-9.0	15-35	0	2.0-4.0	2-10
Lanoak-----	0-30	10-20	---	6.1-7.8	0	0	0	0
	30-49	10-20	---	6.1-7.8	0	0	0	0
	49-60	10-25	---	6.6-8.4	0-15	0	0	0
106:								
Ridgecrest-----	0-9	9.0-20	---	7.4-8.4	15-25	0	0	0
	9-13	7.0-15	---	7.4-8.4	20-50	0	0	0
	13-31	7.0-15	---	7.4-8.4	20-50	0	0	0
	31-35	4.0-10	---	7.4-8.4	40-70	0	0.0-2.0	0-5
	35-45	---	---	---	---	---	---	---
Hondoho-----	0-14	9.0-20	---	6.6-7.8	0	0	0	0
	14-28	8.0-20	---	7.4-8.4	5-30	0	0	0
	28-60	3.0-20	---	7.4-8.4	15-40	0	0	0
107:								
Ridgecrest-----	0-9	9.0-20	---	7.4-8.4	15-25	0	0	0
	9-13	7.0-15	---	7.4-8.4	20-50	0	0	0
	13-31	7.0-15	---	7.4-8.4	20-50	0	0	0
	31-35	4.0-10	---	7.4-8.4	40-70	0	0.0-2.0	0-5
	35-45	---	---	---	---	---	---	---
Hondoho-----	0-14	9.0-20	---	6.6-7.8	0	0	0	0
	14-28	8.0-20	---	7.4-8.4	5-30	0	0	0
	28-60	3.0-20	---	7.4-8.4	15-40	0	0	0
Hymas-----	0-2	10-15	---	6.6-8.4	5-15	0	0	0
	2-7	6.0-15	---	7.4-8.4	10-45	0	0	0
	7-11	5.0-15	---	7.4-9.0	40-50	0	0.0-2.0	0-5
	11-21	---	---	---	---	---	---	---
108:								
Ridgecrest-----	0-9	9.0-20	---	7.4-8.4	15-25	0	0	0
	9-13	7.0-15	---	7.4-8.4	20-50	0	0	0
	13-31	7.0-15	---	7.4-8.4	20-50	0	0	0
	31-35	4.0-10	---	7.4-8.4	40-70	0	0.0-2.0	0-5
	35-45	---	---	---	---	---	---	---
Hondoho-----	0-14	9.0-20	---	6.6-7.8	0	0	0	0
	14-28	8.0-20	---	7.4-8.4	5-30	0	0	0
	28-60	3.0-20	---	7.4-8.4	15-40	0	0	0
Lizdale-----	0-7	8.0-20	---	7.4-7.8	5-15	0	0	0
	7-10	6.0-20	---	7.4-9.0	25-60	0	0	0-5
	10-36	6.0-20	---	7.4-9.0	25-60	0	0	0-5
	36-52	5.0-15	---	7.4-9.0	20-45	0	0	0-5
	52-60	5.0-15	---	7.4-9.0	20-45	0	0.0-4.0	0-5

Table 15.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
109:								
Ridgecrest-----	0-9	9.0-20	---	7.4-8.4	15-25	0	0	0
	9-13	7.0-15	---	7.4-8.4	20-50	0	0	0
	13-31	7.0-15	---	7.4-8.4	20-50	0	0	0
	31-35	4.0-10	---	7.4-8.4	40-70	0	0.0-2.0	0-5
	35-45	---	---	---	---	---	---	---
Hymas-----	0-2	10-15	---	6.6-8.4	5-15	0	0	0
	2-7	6.0-15	---	7.4-8.4	10-45	0	0	0
	7-11	5.0-15	---	7.4-9.0	40-50	0	0.0-2.0	0-5
	11-21	---	---	---	---	---	---	---
110:								
Ririe-----	0-14	10-20	---	6.6-8.4	0	0	0	0
	14-60	7.0-15	---	7.4-9.0	15-35	0	0.0-2.0	5-15
Buist-----	0-15	5.0-15	---	7.4-7.8	0-30	0	0.0-2.0	0-5
	15-28	8.0-20	---	7.9-8.4	15-40	0	0.0-2.0	0-5
	28-60	8.0-20	---	7.9-8.4	15-40	0	0.0-2.0	0-5
111:								
Ririe-----	0-14	10-20	---	6.6-8.4	0	0	0	0
	14-60	7.0-15	---	7.4-9.0	15-35	0	0.0-2.0	5-15
Cedarhill-----	0-7	6.0-15	---	7.4-7.8	10-15	0	0	0
	7-12	6.0-15	---	7.4-8.4	15-35	0	0	0
	12-27	4.0-10	---	7.4-8.4	15-35	0	0	0
	27-60	4.0-10	---	7.9-8.4	15-35	0	0	0
112:								
Ririe-----	0-14	10-20	---	6.6-8.4	0	0	0	0
	14-60	7.0-15	---	7.4-9.0	15-35	0	0.0-2.0	5-15
Cedarhill-----	0-7	6.0-15	---	7.4-7.8	10-15	0	0	0
	7-12	6.0-15	---	7.4-8.4	15-35	0	0	0
	12-27	4.0-10	---	7.4-8.4	15-35	0	0	0
	27-60	4.0-10	---	7.9-8.4	15-35	0	0	0
113:								
Ririe-----	0-14	10-20	---	6.6-8.4	0	0	0	0
	14-60	7.0-15	---	7.4-9.0	15-35	0	0.0-2.0	5-15
Hondoho-----	0-14	9.0-20	---	6.6-7.8	0	0	0	0
	14-28	8.0-20	---	7.4-8.4	5-30	0	0	0
	28-60	3.0-20	---	7.4-8.4	15-40	0	0	0
114:								
Ririe-----	0-14	10-20	---	6.6-8.4	0	0	0	0
	14-60	7.0-15	---	7.4-9.0	15-35	0	0.0-2.0	5-15
Iphil-----	0-10	7.0-15	---	7.4-9.0	5-15	0	0.0-2.0	0
	10-36	6.0-15	---	7.4-9.0	15-35	0	0.0-2.0	0-8
	36-60	6.0-15	---	7.4-9.0	10-15	0	0.0-2.0	5-15
Kucera-----	0-22	8.0-20	---	6.6-8.4	0	0	0	0
	22-42	6.0-15	---	6.6-8.4	0-10	0	0	0
	42-60	5.0-10	---	7.4-9.0	5-15	0	0.0-2.0	0
115:								
Ririe-----	0-14	10-20	---	6.6-8.4	0	0	0	0
	14-60	7.0-15	---	7.4-9.0	15-35	0	0.0-2.0	5-15

Table 15.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
115:								
Iphil-----	0-10	7.0-15	---	7.4-9.0	5-15	0	0.0-2.0	0
	10-36	6.0-15	---	7.4-9.0	15-35	0	0.0-2.0	0-8
	36-60	6.0-15	---	7.4-9.0	10-15	0	0.0-2.0	5-15
Rexburg-----	0-14	7.0-15	---	6.1-7.8	0	0	0	0
	14-22	8.0-15	---	6.6-7.8	0	0	0	0
	22-60	5.0-10	---	7.4-8.4	15-30	0	0.0-2.0	0
116:								
Ririe-----	0-14	10-20	---	6.6-8.4	0	0	0	0
	14-63	7.0-15	---	7.4-9.0	15-35	0	0.0-2.0	5-15
Rexburg-----	0-14	7.0-15	---	6.1-7.8	0	0	0	0
	14-22	8.0-15	---	6.6-7.8	0	0	0	0
	22-60	5.0-10	---	7.4-8.4	15-30	0	0.0-2.0	0
117:								
Ririe-----	0-14	10-20	---	6.6-8.4	0	0	0	0
	14-63	7.0-15	---	7.4-9.0	15-35	0	0.0-2.0	5-15
Watercanyon-----	0-5	6.0-15	---	7.4-7.8	5-15	0	0.0-2.0	0-5
	5-33	3.0-10	---	7.9-9.0	15-35	0	2.0-4.0	2-10
	33-62	3.0-10	---	7.9-9.0	15-35	0	2.0-4.0	2-10
118:								
Ririe-----	0-14	10-20	---	6.6-8.4	0	0	0	0
	14-63	7.0-15	---	7.4-9.0	15-35	0	0.0-2.0	5-15
Watercanyon-----	0-5	6.0-15	---	7.4-7.8	5-15	0	0.0-2.0	0-5
	5-33	3.0-10	---	7.9-9.0	15-35	0	2.0-4.0	2-10
	33-62	3.0-10	---	7.9-9.0	15-35	0	2.0-4.0	2-10
119:								
Samaria-----	0-5	15-25	---	7.4-8.4	1-5	0	0	0-5
	5-16	15-20	---	7.9-9.0	10-15	0	0	0-13
	16-27	10-15	---	7.9-9.0	20-40	0	0.0-2.0	5-15
	27-64	10-15	---	7.9-9.0	15-25	0	2.0-4.0	5-15
120:								
Samaria-----	0-5	15-25	---	7.4-8.4	1-5	0	0	0-5
	5-16	15-20	---	7.9-9.0	10-15	0	0	0-13
	16-27	10-15	---	7.9-9.0	20-40	0	0.0-2.0	5-15
	27-64	10-15	---	7.9-9.0	15-25	0	2.0-4.0	5-15
121:								
Samaria-----	0-5	15-25	---	7.4-8.4	1-5	0	0	0-5
	5-16	15-20	---	7.9-9.0	10-15	0	0	0-13
	16-27	10-15	---	7.9-9.0	20-40	0	0.0-2.0	5-15
	27-64	10-15	---	7.9-9.0	15-25	0	2.0-4.0	5-15
Pollynot-----	0-7	8.0-25	---	6.6-7.8	0	0	0	0
	7-17	8.0-25	---	6.6-8.4	0-20	0	0.0-2.0	0
	17-41	11-20	---	7.4-8.4	15-25	0	0.0-2.0	0-8
	41-56	10-15	---	7.4-8.4	15-35	0	0.0-2.0	0-8
	56-60	10-15	---	7.4-8.4	15-35	0	0.0-2.0	0-8
122:								
Samaria-----	0-5	15-25	---	7.4-8.4	1-5	0	0	0-5
	5-16	15-20	---	7.9-9.0	10-15	0	0	0-13
	16-27	10-15	---	7.9-9.0	20-40	0	0.0-2.0	5-15
	27-64	10-15	---	7.9-9.0	15-25	0	2.0-4.0	5-15

Table 15.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	<i>Inches</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
122: Sterling-----	0-13	8.0-20	---	7.4-8.4	5-15	0	0	0-5
	13-66	6.0-20	---	7.4-8.4	10-40	0	0	0-5
123: Sterling-----	0-13	8.0-20	---	7.4-8.4	5-15	0	0	0-5
	13-66	6.0-20	---	7.4-8.4	10-40	0	0	0-5
124: Thatcher-----	0-7	5.0-15	---	6.6-8.4	0	0	0.0-2.0	0
	7-35	11-21	---	6.6-8.4	0	0	0.0-2.0	0
	35-60	5.0-15	---	7.4-9.0	15-25	0	0.0-2.0	0
125: Thatcher-----	0-7	5.0-15	---	6.6-8.4	0	0	0.0-2.0	0
	7-35	11-21	---	6.6-8.4	0	0	0.0-2.0	0
	35-60	5.0-15	---	7.4-9.0	15-25	0	0.0-2.0	0
Jensen-----	0-12	10-20	---	6.6-7.8	0	0	0	0
	12-45	9.0-20	---	7.4-8.4	0-10	0	0	0
	45-60	7.0-15	---	7.4-8.4	5-15	0	0	0
126: Freedom-----	0-13	10-20	---	7.4-9.0	5-30	0	0.0-2.0	0-5
	13-34	10-20	---	7.9-9.0	15-40	0	2.0-4.0	5-13
	34-60	5.0-25	---	7.4-9.0	10-30	0	0.0-2.0	5-13
127: Tickason-----	0-10	8.0-14	---	6.6-7.8	0	0	0.0-2.0	0
	10-23	6.0-15	---	7.4-8.4	0-5	0	0.0-2.0	0
	23-31	7.0-13	---	7.4-9.0	15-25	0	0.0-2.0	0-10
	31-38	7.0-13	---	7.4-9.0	15-25	0	0.0-2.0	0
	38-60	7.0-15	---	7.4-9.0	15-25	0	0.0-2.0	0
128: Tickason-----	0-10	8.0-14	---	6.6-7.8	0	0	0.0-2.0	0
	10-23	6.0-15	---	7.4-8.4	0-5	0	0.0-2.0	0
	23-31	7.0-13	---	7.4-9.0	15-25	0	0.0-2.0	0-10
	31-38	7.0-13	---	7.4-9.0	15-25	0	0.0-2.0	0
	38-60	7.0-15	---	7.4-9.0	15-25	0	0.0-2.0	0
129: Tirod-----	0-18	10-25	---	6.6-7.8	0	0	0	0
	18-30	10-30	---	6.6-8.4	0	0	0	0
	30-40	10-30	---	6.6-8.4	0	0	0	0
	40-62	10-15	---	7.9-8.4	15-25	0	0	0
130: Toefoot-----	0-26	11-20	---	6.6-7.8	0	0	0	0
	26-33	9.0-20	---	6.6-8.4	0-15	0	0	0-5
	33-40	7.0-15	---	7.9-8.4	10-20	0	0.0-2.0	0-5
	40-62	5.0-10	---	7.9-8.4	10-20	0	0.0-2.0	0-5
131: Welby-----	0-11	8.0-15	---	7.9-9.0	5-20	0	0.0-2.0	5-15
	11-36	6.0-15	---	7.9-9.0	15-35	0	0.0-2.0	5-20
	36-60	3.0-13	---	7.9-9.0	10-30	0	0.0-2.0	5-20
Parleys-----	0-5	10-25	---	6.6-7.8	0	0	0.0-2.0	0
	5-26	10-30	---	6.6-8.4	0	0	0.0-2.0	0
	26-64	10-20	---	7.9-9.0	15-40	0	0.0-2.0	0-5

[illegible]

Table 16.--Water Features

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
1: Araveton-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Hades-----	C	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
2: Arbone-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
3: Arbone-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
4: Arbone-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
5: Arbone-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Hondoho-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Cedarhill-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
6: Arbone-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Hondoho-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Cedarhill-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
7: Bayhook-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
8: Bayhook-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Ecur-----	A	Very low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
9: Bingham-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
10: Bingham-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Tirod-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
11: Bloor-----	C	Medium	January	5.0-6.0	>6.0	---	---	None	---	None
			February	5.0-6.0	>6.0	---	---	None	---	None
			March	5.0-6.0	>6.0	---	---	None	---	None
			April	5.0-6.0	>6.0	---	---	None	---	None
			May	5.0-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Brinum-----	D	Very high	January	0.5-1.5	>6.0	---	---	None	Long	Occasional
			February	0.5-1.5	>6.0	---	---	None	Long	Occasional
			March	0.5-1.5	>6.0	---	---	None	Long	Occasional
			April	0.5-1.5	>6.0	---	---	None	Long	Occasional
			May	0.5-1.5	>6.0	---	---	None	Long	Occasional
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	0.5-1.5	>6.0	---	---	None	---	None
			October	0.5-1.5	>6.0	---	---	None	Long	Occasional
			November	0.5-1.5	>6.0	---	---	None	Long	Occasional
			December	0.5-1.5	>6.0	---	---	None	Long	Occasional
12: Bothwell-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
13: Bothwell-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Hades-----	C	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Justesen-----	C	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
14: Brinnum-----	D	Very high	January	0.5-1.5	>6.0	---	---	None	Long	Occasional
			February	0.5-1.5	>6.0	---	---	None	Long	Occasional
			March	0.5-1.5	>6.0	---	---	None	Long	Occasional
			April	0.5-1.5	>6.0	---	---	None	Long	Occasional
			May	0.5-1.5	>6.0	---	---	None	Long	Occasional
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	0.5-1.5	>6.0	---	---	None	---	None
			October	0.5-1.5	>6.0	---	---	None	Long	Occasional
			November	0.5-1.5	>6.0	---	---	None	Long	Occasional
			December	0.5-1.5	>6.0	---	---	None	Long	Occasional
Logan-----	D	Very high	January	---	---	---	---	None	Very brief	Rare
			February	---	---	---	---	None	Very brief	Rare
			March	0.0-1.5	>6.0	---	---	None	Very brief	Rare
			April	0.0-1.5	>6.0	---	---	None	Very brief	Rare
			May	0.0-1.5	>6.0	---	---	None	Very brief	Rare
			June	0.0-1.5	>6.0	---	---	None	Very brief	Rare
			July	0.0-1.5	>6.0	---	---	None	Very brief	Rare
			August	---	---	---	---	None	Very brief	Rare
			September	---	---	---	---	None	Very brief	Rare
			October	---	---	---	---	None	Very brief	Rare
			November	---	---	---	---	None	Very brief	Rare
			December	---	---	---	---	None	Very brief	Rare
Langless-----	D	Very high	January	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			February	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			March	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			April	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			May	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			June	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			November	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			December	1.0-1.5	>6.0	---	---	None	Very long	Frequent

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
15: Buckboard-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
16: Buist-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
17: Calpac-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
17: Ridgecrest-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Ireland-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
18: Cedarhill-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
19: Cedarhill-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
20: Cedarhill-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Hymas-----	D	Very high	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
21: Cedarhill-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Lostine-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
22: Collinston-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
23: Collinston-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Kearns-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
24: Copenhagen-----	D	Very high	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
24: Lonigan-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Manila-----	C	Very high	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
25: Darkbull-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
25: Pyrat-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Ecur-----	A	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
26: DeJarnet-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
27: Dumps, mine-----	---	---	Jan-Dec	---	---	---	---	None	---	---
28: Ecur-----	A	Very low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
29: Ecur-----	A	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
29: Darkbull-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
30: Elevator-----	C	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	5.0-6.0	5.0-6.0	---	---	None	---	None
			April	5.0-6.0	5.0-6.0	---	---	None	---	None
			May	5.0-6.0	5.0-6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
31: Elevator-----	C	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	5.0-6.0	5.0-6.0	---	---	None	---	None
			April	5.0-6.0	5.0-6.0	---	---	None	---	None
			May	5.0-6.0	5.0-6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
31: Jensen-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
32: Elevator-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	5.0-6.0	5.0-6.0	---	---	None	---	None
			April	5.0-6.0	5.0-6.0	---	---	None	---	None
			May	5.0-6.0	5.0-6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Jensen-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
33: Fridlo-----	C	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	3.2-6.0	>6.0	---	---	None	---	None
			May	3.2-6.0	>6.0	---	---	None	---	None
			June	3.2-6.0	>6.0	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
34: Goosenawt-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	Very brief	Rare
			April	---	---	---	---	None	Very brief	Rare
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
35: Hans-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
36: Highcreek-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Sterling-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
37: Highcreek-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
37: Sterling-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
38: Hillfield-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Kucera-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
39: Hillfield-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Kucera-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
40: Hondoho-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
40: Calpac-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Lizdale-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
41: Hondoho-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
41: Hymas-----	D	Very high	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Pavohroo-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
42: Hondoho-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
42: Hymas-----	D	Very high	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Pavohroo-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
43: Hondoho-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
43: Ridgecrest-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Hades-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
44: Hutchley-----	D	Very high	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
44: McCarey-----	C	High		<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
			January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Araveton-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
45: Hymas-----	D	Very high	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
45: Calpac-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Ireland-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
46: Hymas-----	D	Very high	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
46: Northwater-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Clayburn-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
47: Hymas-----	D	Very high	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
47: Povey-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
48: Hymas-----	D	Very high	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Povey-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
48: Pavohroo-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
49: Inkom-----	D	Very high	January	---	---	---	---	None	Brief	Frequent
			February	0.0-1.5	>6.0	---	---	None	Brief	Frequent
			March	0.0-1.5	>6.0	---	---	None	Brief	Frequent
			April	0.0-1.5	>6.0	---	---	None	Brief	Frequent
			May	0.0-1.5	>6.0	---	---	None	Brief	Frequent
			June	0.0-1.5	>6.0	---	---	None	Brief	Frequent
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
50: Iphil-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
50: Ririe-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Watercanyon-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
51: Ireland-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
51: Calpac-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
52: Jensen-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
53: Jensen-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
54: Jensen-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Iphil-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Wursten-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
55: Jovine-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	Very brief	Rare
			April	5.0-6.0	>6.0	---	---	None	Very brief	Rare
			May	5.0-6.0	>6.0	---	---	None	Very brief	Rare
			June	5.0-6.0	>6.0	---	---	None	Very brief	Rare
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
56: Justesen-----	C	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
57: Justesen-----	C	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
58: Justesen-----	C	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Ririe-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Buist-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
59: Kearns-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
60: Kearns-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
61: Kidman-----	B	Very low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
62: Kidman-----	B	Very low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Preston-----	A	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
63: Kucera-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
64: Lagonot-----	C	Low	January	1.5-3.5	>6.0	---	---	None	Very brief	Rare
			February	1.5-3.5	>6.0	---	---	None	Very brief	Rare
			March	1.5-3.5	>6.0	---	---	None	Very brief	Rare
			April	1.5-3.5	>6.0	---	---	None	Very brief	Rare
			May	1.5-3.5	>6.0	---	---	None	Very brief	Rare
			June	1.5-3.5	>6.0	---	---	None	Very brief	Rare
			July	---	---	---	---	None	Very brief	Rare
			August	---	---	---	---	None	Very brief	Rare
			September	---	---	---	---	None	Very brief	Rare
			October	1.5-3.5	>6.0	---	---	None	Very brief	Rare
			November	1.5-3.5	>6.0	---	---	None	Very brief	Rare
			December	1.5-3.5	>6.0	---	---	None	Very brief	Rare
65: Langless-----	D	Very high	January	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			February	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			March	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			April	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			May	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			June	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			November	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			December	1.0-1.5	>6.0	---	---	None	Very long	Frequent
66: Langless-----	D	Very high	January	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			February	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			March	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			April	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			May	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			June	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			November	1.0-1.5	>6.0	---	---	None	Very long	Frequent
			December	1.0-1.5	>6.0	---	---	None	Very long	Frequent

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
66: Logan-----	D	Very high	January	---	---	---	---	None	Very brief	Rare
			February	---	---	---	---	None	Very brief	Rare
			March	0.0-1.5	>6.0	---	---	None	Very brief	Rare
			April	0.0-1.5	>6.0	---	---	None	Very brief	Rare
			May	0.0-1.5	>6.0	---	---	None	Very brief	Rare
			June	0.0-1.5	>6.0	---	---	None	Very brief	Rare
			July	0.0-1.5	>6.0	---	---	None	Very brief	Rare
			August	---	---	---	---	None	Very brief	Rare
			September	---	---	---	---	None	Very brief	Rare
			October	---	---	---	---	None	Very brief	Rare
			November	---	---	---	---	None	Very brief	Rare
			December	---	---	---	---	None	Very brief	Rare
67: Lanoak-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
68: Lanoak-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
69: Lanoak-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Hondoho-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
70: Logan-----	D	Very high	January	---	---	---	---	None	Very brief	Rare
			February	---	---	---	---	None	Very brief	Rare
			March	0.0-1.5	>6.0	---	---	None	Very brief	Rare
			April	0.0-1.5	>6.0	---	---	None	Very brief	Rare
			May	0.0-1.5	>6.0	---	---	None	Very brief	Rare
			June	0.0-1.5	>6.0	---	---	None	Very brief	Rare
			July	0.0-1.5	>6.0	---	---	None	Very brief	Rare
			August	---	---	---	---	None	Very brief	Rare
			September	---	---	---	---	None	Very brief	Rare
			October	---	---	---	---	None	Very brief	Rare
			November	---	---	---	---	None	Very brief	Rare
			December	---	---	---	---	None	Very brief	Rare

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
71: Lonigan-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Lizdale-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
72: Lostine-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
73: Manila-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
74: Manila-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Broadhead-----	D	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
75: Manila-----	C	Very high	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Broadhead-----	D	Very high	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
76: Manila-----	C	Very high	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
76: Lonigan-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
77: Manila-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Obnot-----	D	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
78: Manila-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Yago-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
79: Manila-----	C	Very high	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
79: Yago-----	C	Very high	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
80: Mellor-----	C	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Freedom-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
81: Neeley-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
82: Northwater-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Povey-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
82: Pavohroo-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
83: Parehat-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	2.0-3.0	>6.0	---	---	None	Long	Occasional
			May	2.0-3.0	>6.0	---	---	None	Long	Occasional
			June	2.0-3.0	>6.0	---	---	None	---	None
			July	2.0-3.0	>6.0	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
84: Parleys-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
85: Parleys-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
86: Parleys-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Welby-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
87: Parleys-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Wheelon-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
88: Pavohroo-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
88: Povey-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
89: Pavohroo-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Stines-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
89: Lonigan-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
90: Pits, gravel-----	D	---	Jan-Dec	---	---	---	---	None	---	---
91: Povey-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
91: Hades-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Hondoho-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
92: Povey-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
92: Ireland-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Calpac-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
93: Povey-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
93: Pavohroo-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
94: Povirt-----	D	Negligible	January	---	---	---	---	None	Very brief	Rare
			February	---	---	---	---	None	Very brief	Rare
			March	---	---	---	---	None	Very brief	Rare
			April	0.0	1.5-1.5	0.0-1.0	Very long	Frequent	Very brief	Rare
			May	0.0	1.5-1.5	0.0-1.0	Very long	Frequent	Very brief	Rare
			June	0.0	1.5-1.5	0.0-1.0	Very long	Frequent	Very brief	Rare
			July	---	---	---	---	None	Very brief	Rare
			August	---	---	---	---	None	Very brief	Rare
			September	---	---	---	---	None	Very brief	Rare
			October	---	---	---	---	None	Very brief	Rare
			November	---	---	---	---	None	Very brief	Rare
			December	---	---	---	---	None	Very brief	Rare
95: Raldridge-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
96: Rexburg-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
97: Rexburg-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Arbone-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
97: Ririe-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
98: Rexburg-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Arbone-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
98: Ririe-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
99: Rexburg-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Iphil-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
99: Watercanyon-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
100: Rexburg-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Lanoak-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
101: Rexburg-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Lanoak-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
102: Rexburg-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
102: Lanoak-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Watercanyon-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
103: Rexburg-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
103: Ririe-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Kucera-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
104: Rexburg-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
104: Thatcher-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Ririe-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
105: Rexburg-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
105: Watercanyon-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Lanoak-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
106: Ridgecrest-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
106: Hondoho-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
107: Ridgecrest-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Hondoho-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
107: Hymas-----	D	Very high	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
108: Ridgecrest-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Hondoho-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
108: Lizdale-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
109: Ridgecrest-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Hymas-----	D	Very high	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
110: Ririe-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Buist-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
111: Ririe-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
111: Cedarhill-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
112: Ririe-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Cedarhill-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
113: Ririe-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Hondoho-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
114: Ririe-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
114: Iphil-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Kucera-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
115: Ririe-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
115: Iphil-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Rexburg-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
116: Ririe-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
116: Rexburg-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
117: Ririe-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Watercanyon-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
118: Ririe-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Watercanyon-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
119: Samaria-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
120: Samaria-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
121: Samaria-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Pollynot-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
122: Samaria-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Sterling-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
123: Sterling-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
124: Thatcher-----	C	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
125: Thatcher-----	C	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Jensen-----	B	High	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
126: Freedom-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
127: Tickason-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
128: Tickason-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
129: Tirod-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
130: Toefoot-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
131: Welby-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
131: Parleys-----	B	Low	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
132: Wursten-----	B	Medium	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
133: Yago-----	C	Very high	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None

Table 16.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				<i>Ft</i>	<i>Ft</i>	<i>Ft</i>				
133: Manila-----	C	Very high	January	---	---	---	---	None	---	None
			February	---	---	---	---	None	---	None
			March	---	---	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
134: Water-----	---	---	Jan-Dec	---	---	---	---	None	---	---

Table 17.--Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
1: Araveton-----	---	---	---	Moderate	High	Low
Hades-----	---	---	---	Moderate	Moderate	Moderate
2: Arbone-----	---	---	---	Moderate	High	Low
3: Arbone-----	---	---	---	Moderate	High	Low
4: Arbone-----	---	---	---	Moderate	High	Low
5: Arbone-----	---	---	---	Moderate	High	Low
Hondoho-----	---	---	---	Moderate	Moderate	Low
Cedarhill-----	---	---	---	Moderate	High	Low
6: Arbone-----	---	---	---	Moderate	High	Low
Hondoho-----	---	---	---	Moderate	Moderate	Low
Cedarhill-----	---	---	---	Moderate	High	Low
7: Bayhook-----	---	---	---	Low	Moderate	Low
8: Bayhook-----	---	---	---	Low	Moderate	Low
Ecur-----	---	---	---	Moderate	High	Moderate
9: Bingham-----	---	---	---	Moderate	High	Low
10: Bingham-----	---	---	---	Moderate	High	Low
Tirod-----	---	---	---	Moderate	High	Low
11: Bloor-----	---	---	---	Moderate	High	High
Brinnum-----	---	---	---	High	High	Low
12: Bothwell-----	---	---	---	High	Moderate	Low
13: Bothwell-----	---	---	---	High	Moderate	Low
Hades-----	---	---	---	Moderate	Moderate	Moderate
Justesen-----	---	---	---	Moderate	High	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		<i>In</i>				
14: Brinnum-----	---	---	---	High	High	Low
Logan-----	---	---	---	High	High	Low
Langless-----	---	---	---	High	High	Moderate
15: Buckboard-----	---	---	---	Moderate	Moderate	Low
16: Buist-----	---	---	---	Moderate	High	Low
17: Calpac-----	---	---	---	Moderate	Moderate	Low
Ridgecrest-----	Bedrock (lithic)	20-40	Indurated	Moderate	High	Low
Ireland-----	Bedrock (lithic)	20-40	Indurated	Moderate	High	Low
18: Cedarhill-----	---	---	---	Moderate	High	Low
19: Cedarhill-----	---	---	---	Moderate	High	Low
20: Cedarhill-----	---	---	---	Moderate	High	Low
Hymas-----	Bedrock (lithic)	10-20	Indurated	Moderate	High	Low
21: Cedarhill-----	---	---	---	Moderate	High	Low
Lostine-----	---	---	---	Moderate	Moderate	Low
22: Collinston-----	---	---	---	High	High	Low
23: Collinston-----	---	---	---	High	High	Low
Kearns-----	---	---	---	High	High	Low
24: Copenhagen-----	Bedrock (lithic)	10-20	Very strongly cemented	Moderate	Moderate	Low
Lonigan-----	Bedrock (paralithic)	20-40	Moderately cemented	Moderate	High	Low
Manila-----	---	---	---	Moderate	Moderate	Low
25: Darkbull-----	---	---	---	Moderate	High	Low
Pyrat-----	---	---	---	Moderate	High	Low
Ecur-----	---	---	---	Moderate	High	Moderate
26: DeJarnet-----	---	---	---	Moderate	High	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
27: Dumps, mine-----	---	---	---	---	---	---
28: Ecur-----	---	---	---	Moderate	High	Moderate
29: Ecur-----	---	---	---	Moderate	High	Moderate
Darkbull-----	---	---	---	Moderate	High	Low
30: Elevator-----	---	---	---	High	High	Low
31: Elevator-----	---	---	---	High	High	Low
Jensen-----	---	---	---	Moderate	High	Low
32: Elevator-----	---	---	---	High	High	Low
Jensen-----	---	---	---	Moderate	High	Low
33: Fridlo-----	---	---	---	High	High	High
34: Goosenawt-----	---	---	---	Moderate	Moderate	Low
35: Hans-----	---	---	---	High	High	Low
36: Highcreek-----	---	---	---	Moderate	High	Low
Sterling-----	---	---	---	Moderate	High	Low
37: Highcreek-----	---	---	---	Moderate	High	Low
Sterling-----	---	---	---	Moderate	High	Low
38: Hillfield-----	---	---	---	Moderate	High	Low
Kucera-----	---	---	---	High	High	Low
39: Hillfield-----	---	---	---	Moderate	High	Low
Kucera-----	---	---	---	High	High	Low
40: Hondoho-----	---	---	---	Moderate	Moderate	Low
Calpac-----	---	---	---	Moderate	Moderate	Low
Lizdale-----	---	---	---	Moderate	High	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		<i>In</i>				
41: Hondoho-----	---	---	---	Moderate	Moderate	Low
Hymas-----	Bedrock (lithic)	10-20	Indurated	Moderate	High	Low
Pavohroo-----	---	---	---	Moderate	Moderate	Low
42: Hondoho-----	---	---	---	Moderate	Moderate	Low
Hymas-----	Bedrock (lithic)	10-20	Indurated	Moderate	High	Low
Pavohroo-----	---	---	---	Moderate	Moderate	Low
43: Hondoho-----	---	---	---	Moderate	Moderate	Low
Ridgecrest-----	Bedrock (lithic)	20-40	Indurated	Moderate	High	Low
Hades-----	---	---	---	Moderate	Moderate	Moderate
44: Hutchley-----	Bedrock (lithic)	10-20	Indurated	Moderate	High	Low
McCarey-----	Bedrock (lithic)	20-40	Indurated	Moderate	High	Low
Araveton-----	---	---	---	Moderate	High	Low
45: Hymas-----	Bedrock (lithic)	10-20	Indurated	Moderate	High	Low
Calpac-----	---	---	---	Moderate	Moderate	Low
Ireland-----	Bedrock (lithic)	20-40	Indurated	Moderate	High	Low
46: Hymas-----	Bedrock (lithic)	10-20	Indurated	Moderate	High	Low
Northwater-----	---	---	---	Moderate	Moderate	Low
Clayburn-----	---	---	---	High	Moderate	Low
47: Hymas-----	Bedrock (lithic)	10-20	Indurated	Moderate	High	Low
Povey-----	---	---	---	Moderate	Moderate	Low
48: Hymas-----	Bedrock (lithic)	10-20	Indurated	Moderate	High	Low
Povey-----	---	---	---	Moderate	Moderate	Low
Pavohroo-----	---	---	---	Moderate	Moderate	Low
49: Inkom-----	---	---	---	High	High	Low
50: Iphil-----	---	---	---	High	High	Low
Ririe-----	---	---	---	High	High	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
50: Watercanyon-----	---	---	---	High	High	Low
51: Ireland-----	Bedrock (lithic)	20-40	Indurated	Moderate	High	Low
Calpac-----	---	---	---	Moderate	Moderate	Low
52: Jensen-----	---	---	---	Moderate	High	Low
53: Jensen-----	---	---	---	Moderate	High	Low
54: Jensen-----	---	---	---	Moderate	High	Low
Iphil-----	---	---	---	High	High	Low
Wursten-----	---	---	---	Moderate	High	Low
55: Jovine-----	---	---	---	High	Moderate	Low
56: Justesen-----	---	---	---	Moderate	High	Low
57: Justesen-----	---	---	---	Moderate	High	Low
58: Justesen-----	---	---	---	Moderate	High	Low
Ririe-----	---	---	---	High	High	Low
Buist-----	---	---	---	Moderate	High	Low
59: Kearns-----	---	---	---	High	High	Low
60: Kearns-----	---	---	---	High	High	Low
61: Kidman-----	---	---	---	Moderate	High	Moderate
62: Kidman-----	---	---	---	Moderate	High	Moderate
Preston-----	---	---	---	Low	High	Moderate
63: Kucera-----	---	---	---	High	High	Low
64: Lagonot-----	---	---	---	Moderate	High	Low
65: Langless-----	---	---	---	High	High	Moderate

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
66: Langless-----	---	---	---	High	High	Moderate
Logan-----	---	---	---	High	High	Low
67: Lanoak-----	---	---	---	High	Moderate	Low
68: Lanoak-----	---	---	---	High	Moderate	Low
69: Lanoak-----	---	---	---	High	Moderate	Low
Hondoho-----	---	---	---	Moderate	Moderate	Low
70: Logan-----	---	---	---	High	High	Low
71: Lonigan-----	Bedrock (paralithic)	20-40	Moderately cemented	Moderate	High	Low
Lizdale-----	---	---	---	Moderate	High	Low
72: Lostine-----	---	---	---	Moderate	Moderate	Low
73: Manila-----	---	---	---	Moderate	Moderate	Low
74: Manila-----	---	---	---	Moderate	Moderate	Low
Broadhead-----	---	---	---	Moderate	Moderate	Low
75: Manila-----	---	---	---	Moderate	Moderate	Low
Broadhead-----	---	---	---	Moderate	Moderate	Low
76: Manila-----	---	---	---	Moderate	Moderate	Low
Lonigan-----	Bedrock (paralithic)	20-40	Moderately cemented	Moderate	High	Low
77: Manila-----	---	---	---	Moderate	Moderate	Low
Obnot-----	---	---	---	Moderate	Moderate	Low
78: Manila-----	---	---	---	Moderate	Moderate	Low
Yago-----	---	---	---	Moderate	High	Low
79: Manila-----	---	---	---	Moderate	Moderate	Low
Yago-----	---	---	---	Moderate	High	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
80:						
Mellor-----	---	---	---	High	High	High
Freedom-----	---	---	---	Moderate	High	Moderate
81:						
Neeley-----	---	---	---	Moderate	High	Low
82:						
Northwater-----	---	---	---	Moderate	Moderate	Low
Povey-----	---	---	---	Moderate	Moderate	Low
Pavohroo-----	---	---	---	Moderate	Moderate	Low
83:						
Parehat-----	---	---	---	High	High	Low
84:						
Parleys-----	---	---	---	High	High	Low
85:						
Parleys-----	---	---	---	High	High	Low
86:						
Parleys-----	---	---	---	High	High	Low
Welby-----	---	---	---	Moderate	High	Low
87:						
Parleys-----	---	---	---	High	High	Low
Wheelon-----	---	---	---	High	High	Low
88:						
Pavohroo-----	---	---	---	Moderate	Moderate	Low
Povey-----	---	---	---	Moderate	Moderate	Low
89:						
Pavohroo-----	---	---	---	Moderate	Moderate	Low
Stines-----	---	---	---	Moderate	High	Low
Lonigan-----	Bedrock (paralithic)	20-40	Moderately cemented	Moderate	High	Low
90:						
Pits, gravel-----	---	---	---	---	---	---
91:						
Povey-----	---	---	---	Moderate	Moderate	Low
Hades-----	---	---	---	Moderate	Moderate	Moderate
Hondoho-----	---	---	---	Moderate	Moderate	Low
92:						
Povey-----	---	---	---	Moderate	Moderate	Low
Ireland-----	Bedrock (lithic)	20-40	Indurated	Moderate	High	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		<i>In</i>				
92: Calpac-----	---	---	---	Moderate	Moderate	Low
93: Povey-----	---	---	---	Moderate	Moderate	Low
Pavohroo-----	---	---	---	Moderate	Moderate	Low
94: Povirt-----	---	---	---	High	High	Low
95: Raldridge-----	---	---	---	Moderate	High	Low
96: Rexburg-----	---	---	---	High	High	Low
97: Rexburg-----	---	---	---	High	High	Low
Arbone-----	---	---	---	Moderate	High	Low
Ririe-----	---	---	---	High	High	Low
98: Rexburg-----	---	---	---	High	High	Low
Arbone-----	---	---	---	Moderate	High	Low
Ririe-----	---	---	---	High	High	Low
99: Rexburg-----	---	---	---	High	High	Low
Iphil-----	---	---	---	High	High	Low
Watercanyon-----	---	---	---	High	High	Low
100: Rexburg-----	---	---	---	High	High	Low
Lanoak-----	---	---	---	High	Moderate	Low
101: Rexburg-----	---	---	---	High	High	Low
Lanoak-----	---	---	---	High	Moderate	Low
102: Rexburg-----	---	---	---	High	High	Low
Lanoak-----	---	---	---	High	Moderate	Low
Watercanyon-----	---	---	---	High	High	Low
103: Rexburg-----	---	---	---	High	High	Low
Ririe-----	---	---	---	High	High	Low
Kucera-----	---	---	---	High	High	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
104:						
Rexburg-----	---	---	---	High	High	Low
Thatcher-----	---	---	---	High	High	Moderate
Ririe-----	---	---	---	High	High	Low
105:						
Rexburg-----	---	---	---	High	High	Low
Watercanyon-----	---	---	---	High	High	Low
Lanoak-----	---	---	---	High	Moderate	Low
106:						
Ridgecrest-----	Bedrock (lithic)	20-40	Indurated	Moderate	High	Low
Hondoho-----	---	---	---	Moderate	Moderate	Low
107:						
Ridgecrest-----	Bedrock (lithic)	20-40	Indurated	Moderate	High	Low
Hondoho-----	---	---	---	Moderate	Moderate	Low
Hymas-----	Bedrock (lithic)	10-20	Indurated	Moderate	High	Low
108:						
Ridgecrest-----	Bedrock (lithic)	20-40	Indurated	Moderate	High	Low
Hondoho-----	---	---	---	Moderate	Moderate	Low
Lizdale-----	---	---	---	Moderate	High	Low
109:						
Ridgecrest-----	Bedrock (lithic)	20-40	Indurated	Moderate	High	Low
Hymas-----	Bedrock (lithic)	10-20	Indurated	Moderate	High	Low
110:						
Ririe-----	---	---	---	High	High	Low
Buist-----	---	---	---	Moderate	High	Low
111:						
Ririe-----	---	---	---	High	High	Low
Cedarhill-----	---	---	---	Moderate	High	Low
112:						
Ririe-----	---	---	---	High	High	Low
Cedarhill-----	---	---	---	Moderate	High	Low
113:						
Ririe-----	---	---	---	High	High	Low
Hondoho-----	---	---	---	Moderate	Moderate	Low
114:						
Ririe-----	---	---	---	High	High	Low
Iphil-----	---	---	---	High	High	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		<i>In</i>				
114: Kucera-----	---	---	---	High	High	Low
115: Ririe-----	---	---	---	High	High	Low
Iphil-----	---	---	---	High	High	Low
Rexburg-----	---	---	---	High	High	Low
116: Ririe-----	---	---	---	High	High	Low
Rexburg-----	---	---	---	High	High	Low
117: Ririe-----	---	---	---	High	High	Low
Watercanyon-----	---	---	---	High	High	Low
118: Ririe-----	---	---	---	High	High	Low
Watercanyon-----	---	---	---	High	High	Low
119: Samaria-----	---	---	---	Moderate	High	Low
120: Samaria-----	---	---	---	Moderate	High	Low
121: Samaria-----	---	---	---	Moderate	High	Low
Pollynot-----	---	---	---	Moderate	Moderate	Low
122: Samaria-----	---	---	---	Moderate	High	Low
Sterling-----	---	---	---	Moderate	High	Low
123: Sterling-----	---	---	---	Moderate	High	Low
124: Thatcher-----	---	---	---	High	High	Moderate
125: Thatcher-----	---	---	---	High	High	Moderate
Jensen-----	---	---	---	Moderate	High	Low
126: Freedom-----	---	---	---	Moderate	High	Moderate
127: Tickason-----	---	---	---	Moderate	Moderate	Low
128: Tickason-----	---	---	---	Moderate	Moderate	Low

Table 17.--Soil Features--Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		<i>In</i>				
129: Tirod-----	---	---	---	Moderate	High	Low
130: Toefoot-----	---	---	---	Moderate	Moderate	Low
131: Welby-----	---	---	---	Moderate	High	Low
Parleys-----	---	---	---	High	High	Low
132: Wursten-----	---	---	---	Moderate	High	Low
133: Yago-----	---	---	---	Moderate	High	Low
Manila-----	---	---	---	Moderate	Moderate	Low
134: Water-----	---	---	---	---	---	---

Table 18.--Taxonomic Classification of the Soils

(An asterisk in the first column indicates a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series)

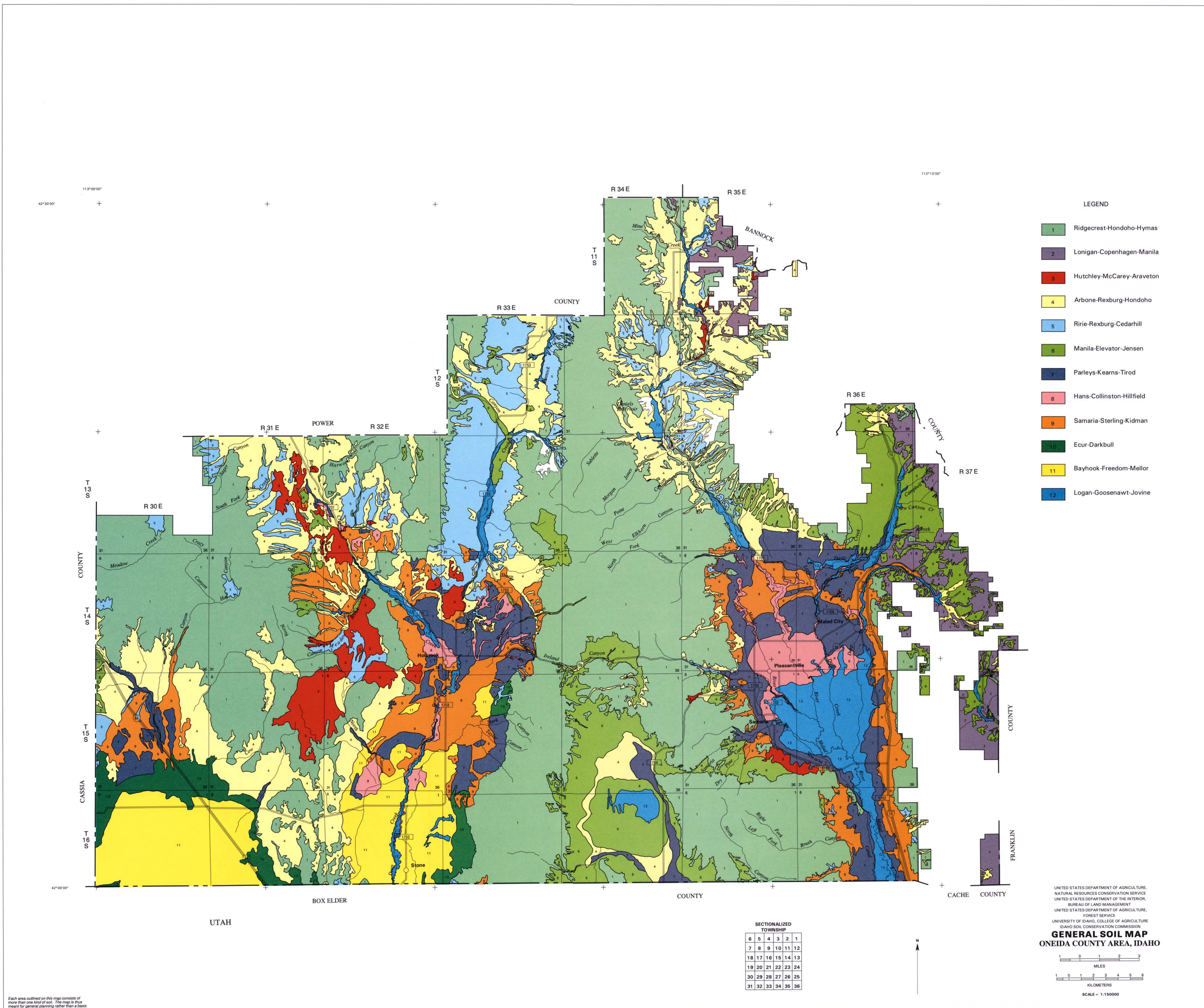
Soil name	Family or higher taxonomic class
Araveton-----	Fine-loamy, mixed, frigid Calcic Haploxerolls
Arbone-----	Coarse-loamy, mixed, frigid Calcic Haploxerolls
Bayhook-----	Coarse-silty, mixed, mesic Sodic Xeric Haplocalcids
*Bingham-----	Fine-loamy, mixed, mesic Calcic Pachic Argixerolls
Bloor-----	Fine-silty, mixed, mesic Durinodic Xeric Natrargids
Bothwell-----	Fine-silty, mixed, frigid Pachic Argixerolls
*Brinnum-----	Fine-silty, mixed (calcareous), mesic Aeric Endoaquents
Broadhead-----	Fine, montmorillonitic, frigid Pachic Argixerolls
Buckboard-----	Fine-loamy, mixed, frigid Pachic Haploxerolls
Buist-----	Loamy-skeletal, mixed, frigid Calcic Haploxerolls
Calpac-----	Loamy-skeletal, mixed, frigid Calcic Pachic Haploxerolls
Cedarhill-----	Loamy-skeletal, mixed, frigid Typic Calcixerolls
Clayburn-----	Fine-loamy, mixed Argic Pachic Cryoborolls
Collinston-----	Fine-silty, mixed, mesic Typic Calcixerolls
Copenhagen-----	Ashy-skeletal, frigid Lithic Haploxerolls
Darkbull-----	Loamy-skeletal, mixed, mesic Sodic Xeric Haplocalcids
DeJarnet-----	Loamy-skeletal, mixed, mesic Calcic Pachic Haploxerolls
Ecur-----	Coarse-loamy, mixed, mesic Sodic Xeric Haplocalcids
Elevator-----	Fine-silty, mixed, frigid Calcic Argixerolls
Freedom-----	Fine-silty, mixed, mesic Xeric Haplocalcids
Fridlo-----	Fine-silty, mixed, mesic Typic Natrixerolls
Goosenawt-----	Fine-loamy, mixed, mesic Cumulic Haploxerolls
Hades-----	Fine-loamy, mixed, frigid Pachic Argixerolls
Hans-----	Fine-silty, mixed, mesic Calcixerollic Xerochrepts
Highcreek-----	Fine-loamy, mixed, mesic Calcic Haploxerolls
Hillfield-----	Coarse-silty, mixed, mesic Calcixerollic Xerochrepts
Hondoho-----	Loamy-skeletal, mixed, frigid Calcic Haploxerolls
Hutchley-----	Loamy-skeletal, mixed, frigid Lithic Argixerolls
*Hymas-----	Loamy-skeletal, carbonatic, frigid Lithic Calcixerolls
Inkom-----	Fine-silty, mixed (calcareous), frigid Cumulic Endoaquolls
Iphil-----	Coarse-silty, mixed, frigid Typic Calcixerolls
Ireland-----	Loamy-skeletal, mixed, frigid Calcic Haploxerolls
Jensen-----	Fine-loamy, mixed, frigid Calcic Pachic Argixerolls
Jovine-----	Coarse-silty, mixed, frigid Cumulic Haploxerolls
Justesen-----	Fine-loamy, mixed, frigid Calcic Argixerolls
Kearns-----	Fine-silty, mixed, mesic Calcic Haploxerolls
Kidman-----	Coarse-loamy, mixed, mesic Calcic Haploxerolls
Kucera-----	Coarse-silty, mixed, frigid Calcic Pachic Haploxerolls
Lagonot-----	Fine-silty, mixed, mesic Aquic Calcixerolls
Langless-----	Coarse-silty, mesic Typic Calciaquolls
Lanoak-----	Fine-silty, mixed, frigid Pachic Haploxerolls
Lizdale-----	Loamy-skeletal, carbonatic, frigid Typic Calcixerolls
Logan-----	Fine-silty, mesic Typic Calciaquolls
Lonigan-----	Ashy-skeletal, frigid Vitrandic Haploxerolls
Lostine-----	Coarse-silty, mixed, frigid Pachic Haploxerolls
Manila-----	Fine, montmorillonitic, frigid Typic Argixerolls
McCarey-----	Fine-loamy, mixed, frigid Calcic Argixerolls
Mellor-----	Fine-silty, mixed, mesic Xeric Natrargids
Neeley-----	Coarse-silty, mixed, mesic Calcicidic Haploxerolls
Northwater-----	Loamy-skeletal, mixed Cryic Pachic Paleborolls
Obnot-----	Fine, montmorillonitic, frigid Typic Haploxererts
Parehat-----	Fine-silty, mixed, mesic Fluvaquentic Haploxerolls
Parleys-----	Fine-silty, mixed, mesic Calcic Argixerolls
Pavohroo-----	Fine-loamy, mixed Pachic Cryoborolls
Pollynot-----	Fine-loamy, mixed, mesic Calcic Argixerolls
Povey-----	Loamy-skeletal, mixed Pachic Cryoborolls
Povirt-----	Fine, montmorillonitic (calcareous), frigid Vertic Epiaquepts
Preston-----	Mixed, mesic Typic Xeropsamments
Pyrat-----	Loamy-skeletal, mixed, mesic Durinodic Xeric Haplocalcids
Raldrige-----	Fine-loamy, mixed, mesic Calcic Pachic Argixerolls

Table 18.--Taxonomic Classification of the Soils--Continued

Soil name	Family or higher taxonomic class
Rexburg-----	Coarse-silty, mixed, frigid Calcic Haploxerolls
*Ridgecrest-----	Loamy-skeletal, carbonatic, frigid Typic Calcixerolls
Ririe-----	Coarse-silty, mixed, frigid Calcic Haploxerolls
Samaria-----	Fine-loamy, mixed, mesic Typic Calcixerolls
Sterling-----	Loamy-skeletal, mixed, mesic Typic Calcixerolls
Stines-----	Ashy-skeletal, frigid Vitrandic Haploxerolls
Thatcher-----	Fine-silty, mixed, frigid Calcic Argixerolls
Tickason-----	Coarse-loamy, mixed, mesic Calcic Haploxerolls
Tirod-----	Fine-loamy, mixed, mesic Calcic Argixerolls
Toefoot-----	Coarse-loamy, mixed, frigid Cumulic Haploxerolls
Watercanyon-----	Coarse-silty, mixed, frigid Calcixerollic Xerochrepts
Welby-----	Coarse-silty, mixed, mesic Typic Calcixerolls
Wheelon-----	Fine-silty, mixed, mesic Calcixerollic Xerochrepts
Wursten-----	Coarse-loamy, mixed, frigid Typic Calcixerolls
Yago-----	Clayey-skeletal, montmorillonitic, frigid Typic Argixerolls

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113°00'00"
42°30'00"

112°10'00"

T 13 S
COUNTY
T 14 S
T 15 S
CASSIA
T 16 S

BOX ELDER

COUNTY

CACHE COUNTY

U

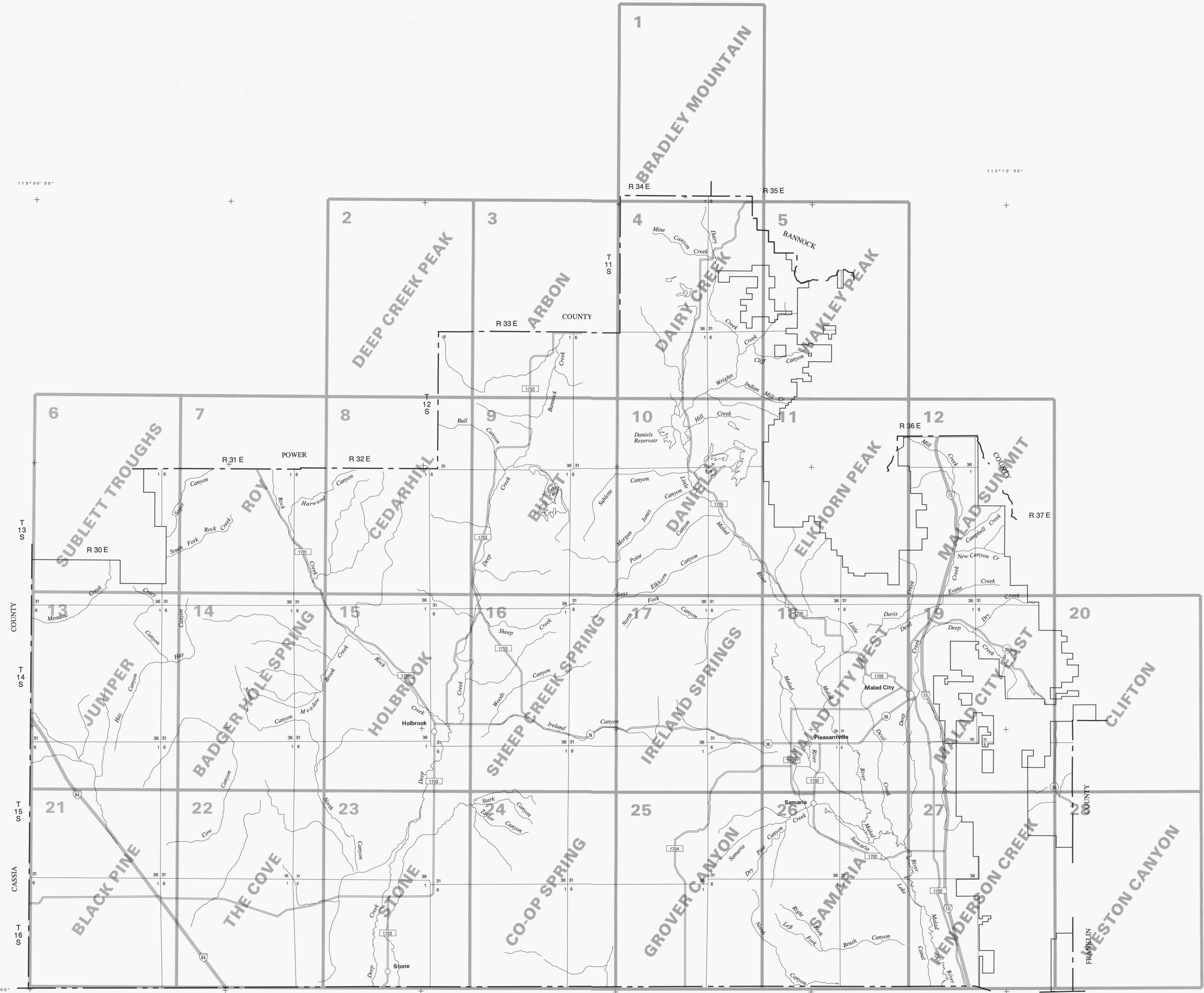
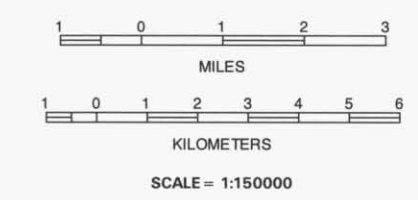
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SECTIONALIZED TOWNSHIP											
6	5	4	3	2	1						
7	8	9	10	11	12						
18	17	16	15	14	13						
19	20	21	22	23	24						
30	29	28	27	26	25						
31	32	33	34	35	36						

INDEX TO MAP SHEETS
ONEIDA COUNTY AREA, IDAHO



SOIL LEGEND

SYMBOL	NAME	SYMBOL	NAME
1	Araveton-Hades complex, 4 to 12 percent slopes	68	Lanoak silt loam, 12 to 30 percent slopes
2	Arbone silt loam, 0 to 4 percent slopes	69	Lanoak-Hondoho complex, 6 to 20 percent slopes
3	Arbone silt loam, 4 to 12 percent slopes	70	Logan silt loam, 0 to 2 percent slopes
4	Arbone silt loam, 12 to 20 percent slopes	71	Lonigan-Lizdale association, 6 to 40 percent slopes
5	Arbone-Hondoho-Cedarhill complex, 4 to 12 percent slopes	72	Lostine silt loam, 20 to 30 percent slopes
6	Arbone-Hondoho-Cedarhill complex, 12 to 30 percent slopes	73	Manila silt loam, 4 to 12 percent slopes
7	Bayhook silt loam, 0 to 2 percent slopes	74	Manila-Broadhead complex, 4 to 12 percent slopes
8	Bayhook-Ecur complex, 0 to 4 percent slopes	75	Manila-Broadhead complex, 12 to 30 percent slopes
9	Bingham gravelly loam, 1 to 4 percent slopes	76	Manila-Lonigan complex, 6 to 40 percent slopes
10	Bingham-Tirod complex, 0 to 2 percent slopes	77	Manila-Obnot complex, 4 to 12 percent slopes
11	Bloor-Brinnum complex, 0 to 2 percent slopes	78	Manila-Yago complex, 4 to 12 percent slopes
12	Bothwell silt loam, 0 to 2 percent slopes	79	Manila-Yago complex, 12 to 30 percent slopes
13	Bothwell-Hades-Justesen complex, 6 to 25 percent slopes	80	Mellor-Freedom complex, 0 to 2 percent slopes
14	Brinnum-Logan-Langless complex, 0 to 2 percent slopes	81	Neeley silt loam, 0 to 4 percent slopes
15	Buckboard loam, 0 to 2 percent slopes	82	Northwater-Povey-Pavohroo association, 30 to 60 percent slopes
16	Buist gravelly silt loam, 20 to 30 percent slopes	83	Parehat silt loam, 0 to 2 percent slopes
17	Calpac-Ridgecrest-Ireland association, 40 to 70 percent slopes	84	Parleys silt loam, 0 to 2 percent slopes
18	Cedarhill gravelly silt loam, 4 to 12 percent slopes	85	Parleys silt loam, 2 to 4 percent slopes
19	Cedarhill gravelly silt loam, 12 to 30 percent slopes	86	Parleys-Welby complex, 2 to 12 percent slopes
20	Cedarhill-Hymas association, 20 to 55 percent slopes	87	Parleys-Wheelon complex, 4 to 12 percent slopes
21	Cedarhill-Lostine complex, 12 to 30 percent slopes	88	Pavohroo-Povey association, 30 to 60 percent slopes
22	Collinston silt loam, 0 to 2 percent slopes	89	Pavohroo-Stines-Lonigan association, 10 to 40 percent slopes
23	Collinston-Kearns complex, 2 to 12 percent slopes	90	Pts. gravel
24	Copenhagen-Lonigan-Manila association, 12 to 50 percent slopes	91	Povey-Hades-Hondoho association, 10 to 50 percent slopes
25	Darkbull-Pyrat-Ecur complex, 2 to 30 percent slopes	92	Povey-Ireland-Calpac association, 30 to 70 percent slopes
26	DeJarnet gravelly silt loam, 0 to 4 percent slopes	93	Povey-Pavohroo association, 30 to 60 percent slopes
27	Dumps, mine	94	Povirt silty clay loam, 0 to 2 percent slopes
28	Ecur fine sandy loam, 0 to 4 percent slopes	95	Raldrige gravelly loam, 4 to 12 percent slopes
29	Ecur-Darkbull complex, 1 to 8 percent slopes	96	Rexburg silt loam, 1 to 4 percent slopes
30	Elevator silt loam, 0 to 4 percent slopes	97	Rexburg-Arbone-Ririe complex, 4 to 12 percent slopes
31	Elevator-Jensen complex, 0 to 4 percent slopes	98	Rexburg-Arbone-Ririe complex, 12 to 25 percent slopes
32	Elevator-Jensen complex, 4 to 12 percent slopes	99	Rexburg-Iphil-Watercanyon complex, 12 to 30 percent slopes
33	Endlo silt loam, 0 to 2 percent slopes	100	Rexburg-Lanoak complex, 4 to 12 percent slopes
34	Goosenawt gravelly loam, 0 to 2 percent slopes	101	Rexburg-Lanoak complex, 12 to 25 percent slopes
35	Hans silt loam, 0 to 2 percent slopes	102	Rexburg-Lanoak-Watercanyon complex, 4 to 12 percent slopes
36	Highcreek-Sterling complex, 4 to 12 percent slopes	103	Rexburg-Ririe-Kucera complex, 2 to 8 percent slopes
37	Highcreek-Sterling complex, 12 to 25 percent slopes	104	Rexburg-Thatcher-Ririe complex, 12 to 30 percent slopes
38	Hillfield-Kucera complex, 4 to 30 percent slopes	105	Rexburg-Watercanyon-Lanoak complex, 12 to 20 percent slopes
39	Hillfield-Kucera complex, 30 to 50 percent slopes	106	Ridgecrest-Hondoho complex, 30 to 60 percent slopes
40	Hondoho-Calpac-Lizdale association, 30 to 70 percent slopes	107	Ridgecrest-Hondoho-Hymas association, 30 to 60 percent slopes
41	Hondoho-Hymas-Pavohroo association, 12 to 30 percent slopes	108	Ridgecrest-Hondoho-Lizdale association, 30 to 60 percent slopes
42	Hondoho-Hymas-Pavohroo association, 30 to 60 percent slopes	109	Ridgecrest-Hymas association, 30 to 60 percent slopes
43	Hondoho-Ridgecrest-Hades association, 12 to 50 percent slopes	110	Ririe-Buist complex, 4 to 12 percent slopes
44	Hutchley-McCarey-Araveton complex, 4 to 40 percent slopes	111	Ririe-Cedarhill complex, 4 to 12 percent slopes
45	Hymas-Calpac-Ireland association, 30 to 70 percent slopes	112	Ririe-Cedarhill complex, 12 to 20 percent slopes
46	Hymas-Northwater-Clayburn association, 20 to 60 percent slopes	113	Ririe-Hondoho complex, 12 to 20 percent slopes
47	Hymas-Povey association, 30 to 60 percent slopes	114	Ririe-Iphil-Kucera complex, 2 to 8 percent slopes
48	Hymas-Povey-Pavohroo association, 30 to 70 percent slopes	115	Ririe-Iphil-Rexburg complex, 4 to 12 percent slopes
49	Inkom silt loam, 0 to 1 percent slopes	116	Ririe-Rexburg complex, 4 to 12 percent slopes
50	Iphil-Ririe-Watercanyon complex, 8 to 20 percent slopes	117	Ririe-Watercanyon complex, 4 to 12 percent slopes
51	Ireland-Calpac association, 30 to 60 percent slopes	118	Ririe-Watercanyon complex, 12 to 30 percent slopes
52	Jensen silt loam, 0 to 2 percent slopes	119	Samaria silt loam, 0 to 4 percent slopes
53	Jensen silt loam, 2 to 6 percent slopes	120	Samaria silt loam, 4 to 8 percent slopes
54	Jensen-Iphil-Wursten complex, 4 to 12 percent slopes	121	Samaria-Pollynot complex, 4 to 12 percent slopes
55	Jovine silt loam, 0 to 2 percent slopes	122	Samaria-Sterling complex, 4 to 12 percent slopes
56	Justesen silt loam, 4 to 12 percent slopes	123	Sterling very gravelly loam, 12 to 20 percent slopes
57	Justesen silt loam, 12 to 25 percent slopes	124	Thatcher silt loam, 4 to 12 percent slopes
58	Justesen-Ririe-Buist complex, 12 to 20 percent slopes	125	Thatcher-Jensen complex, 12 to 30 percent slopes
59	Kearns silt loam, 0 to 2 percent slopes	126	Freedom silt loam, 0 to 4 percent slopes
60	Kearns silt loam, 2 to 4 percent slopes	127	Tickason very fine sandy loam, 0 to 2 percent slopes
61	Kidman fine sandy loam, 1 to 4 percent slopes	128	Tickason very fine sandy loam, 2 to 4 percent slopes
62	Kidman-Preston association, 2 to 12 percent slopes	129	Tirod silt loam, 0 to 2 percent slopes
63	Kucera silt loam, 4 to 12 percent slopes	130	Toefoot silt loam, 0 to 4 percent slopes
64	Lagonot silt loam, 0 to 3 percent slopes	131	Welby-Parleys complex, 0 to 2 percent slopes
65	Langless silt loam, 0 to 2 percent slopes	132	Wursten gravelly silt loam, 4 to 15 percent slopes
66	Langless-Logan complex, 0 to 2 percent slopes	133	Yago-Manila complex, 20 to 40 percent slopes
67	Lanoak silt loam, 0 to 4 percent slopes	134	Water

CONVENTIONAL AND SPECIAL
SYMBOLS LEGEND

CULTURAL FEATURES

BOUNDARIES

National, state, or province

County or parish

Reservation (national forest or park,
state forest or park)

Limit of soil survey (label)
and/or denied access area

Field sheet matchline and neatline

OTHER BOUNDARY

Airport, airfield

Cemetery

City/county park

LAND DIVISION CORNER
(section and land grants)

TRANSPORTATION

Divided roads

Other roads

Trail

ROAD EMBLEMS AND DESIGNATIONS

Interstate

Federal

State

County, farm or ranch

RAILROAD

DAMS

Medium or small

MISCELLANEOUS CULTURAL FEATURES

Church

School

HYDROGRAPHIC FEATURES

STREAMS

Perennial stream

SMALL LAKES, PONDS, AND RESERVOIRS

Perennial water

MISCELLANEOUS WATER FEATURES

Marsh or spring

Spring

Well, artesian

Well, irrigation

SPECIAL SYMBOLS FOR SOIL
SURVEY AND SSURGO

SOIL DELINEATIONS AND SYMBOLS

Short steep slope

MISCELLANEOUS SURFACE FEATURES

Clay spot

Gravelly spot

Gravel pit

Rock outcrop (includes sandstone and shale)

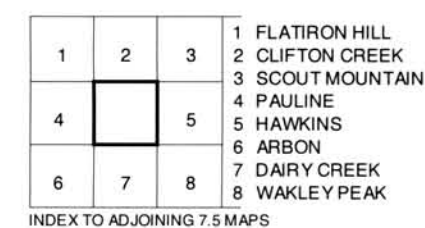
Sandy spot

Stony spot

Very stony spot

AD HOC FEATURES

Hardpan





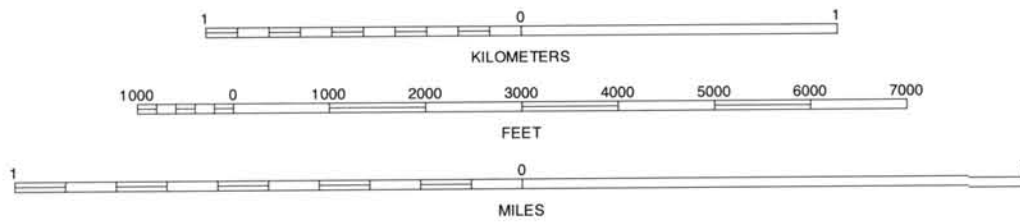
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North American Datum of 1983 (NAD83), GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 12.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



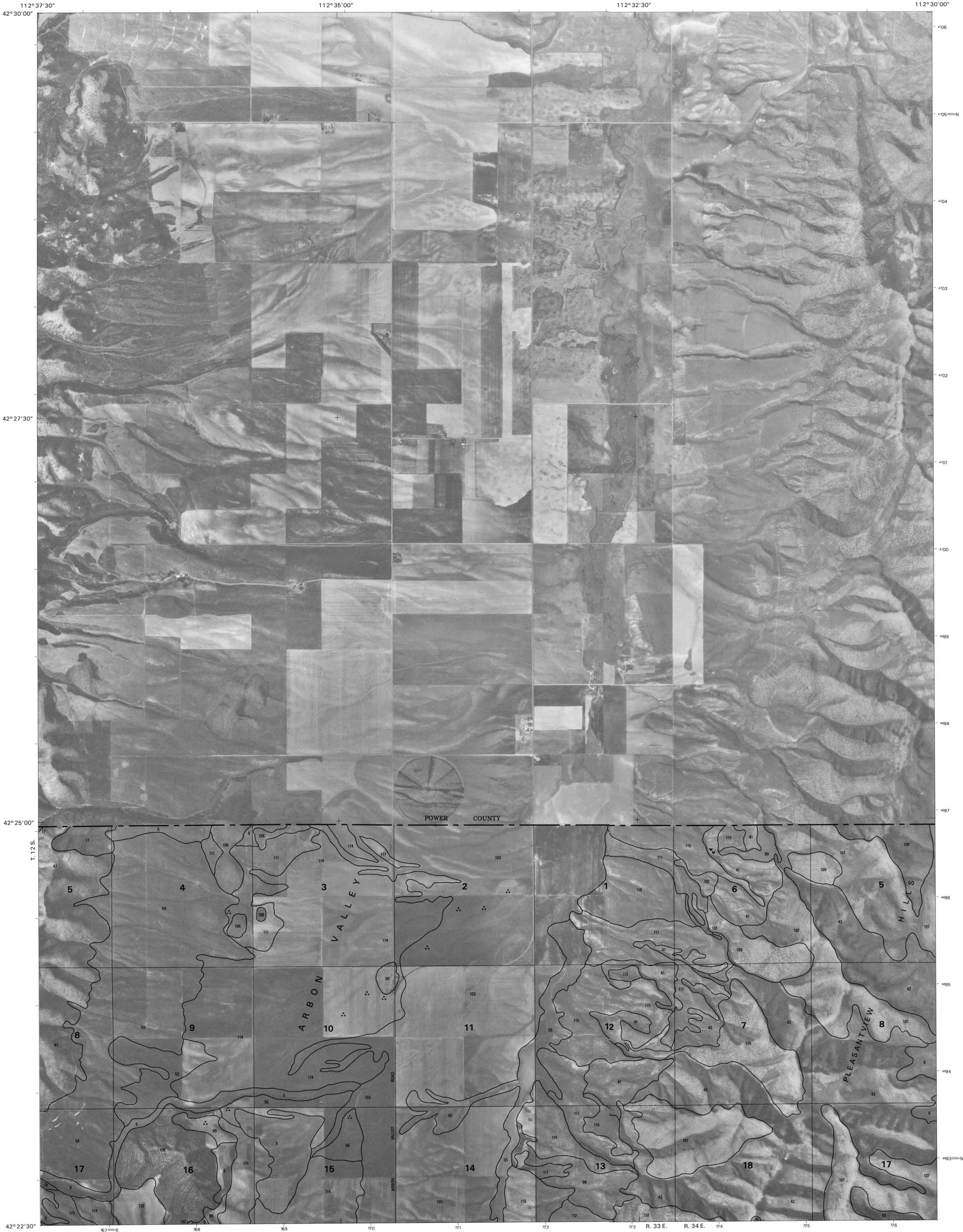
QUADRANGLE LOCATION



1	2	3	1 ROCKLAND EAST
4	5	6	2 BANNOCK PEAK
7	8	9	3 PAULINE
			4 ROYNE
			5 ARBON
			6 ROY
			7 CEDARHILL
			8 BUIST

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DEEP CREEK PEAK, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 2 OF 28

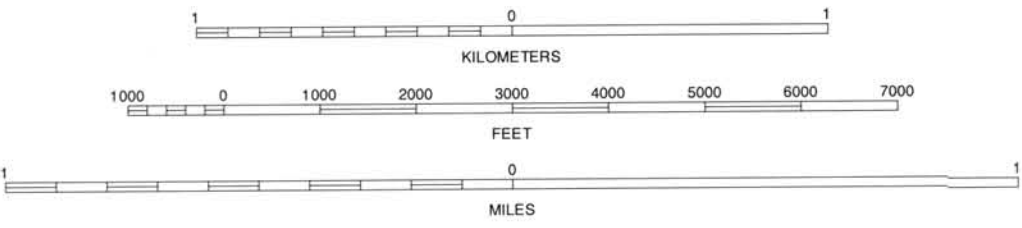


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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



1	2	3
4	5	6
7	8	9

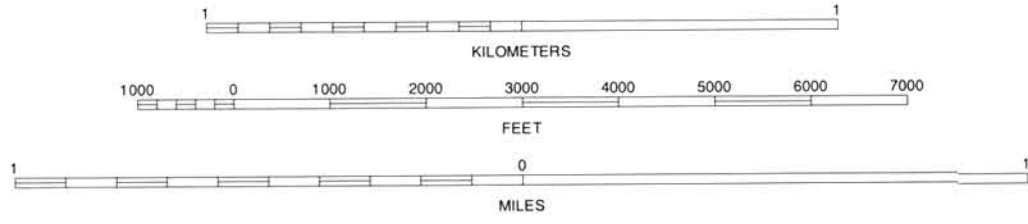
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ARBON, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 3 OF 28



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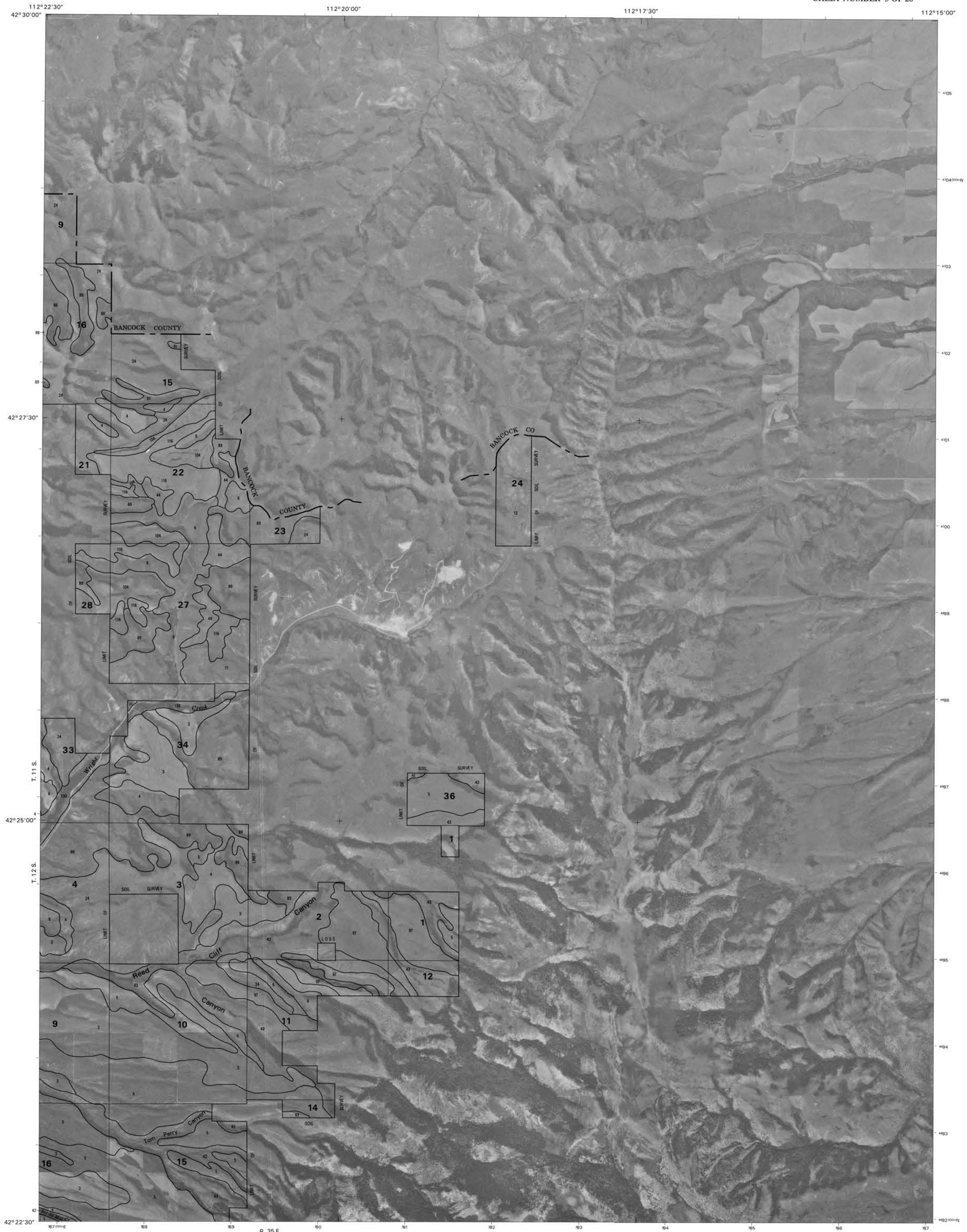
North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



1	2	3	1 PAULINE
			2 BRADLEY MOUNTAIN
			3 HAWKINS
4		5	4 ARBON
			5 WAKLEY PEAK
			6 BUJST
6	7	8	7 DANIELS
			8 ELKHORN PEAK

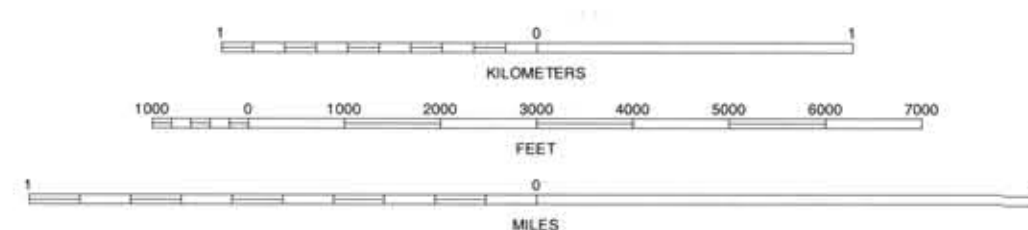
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DAIRY CREEK, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 4 OF 28



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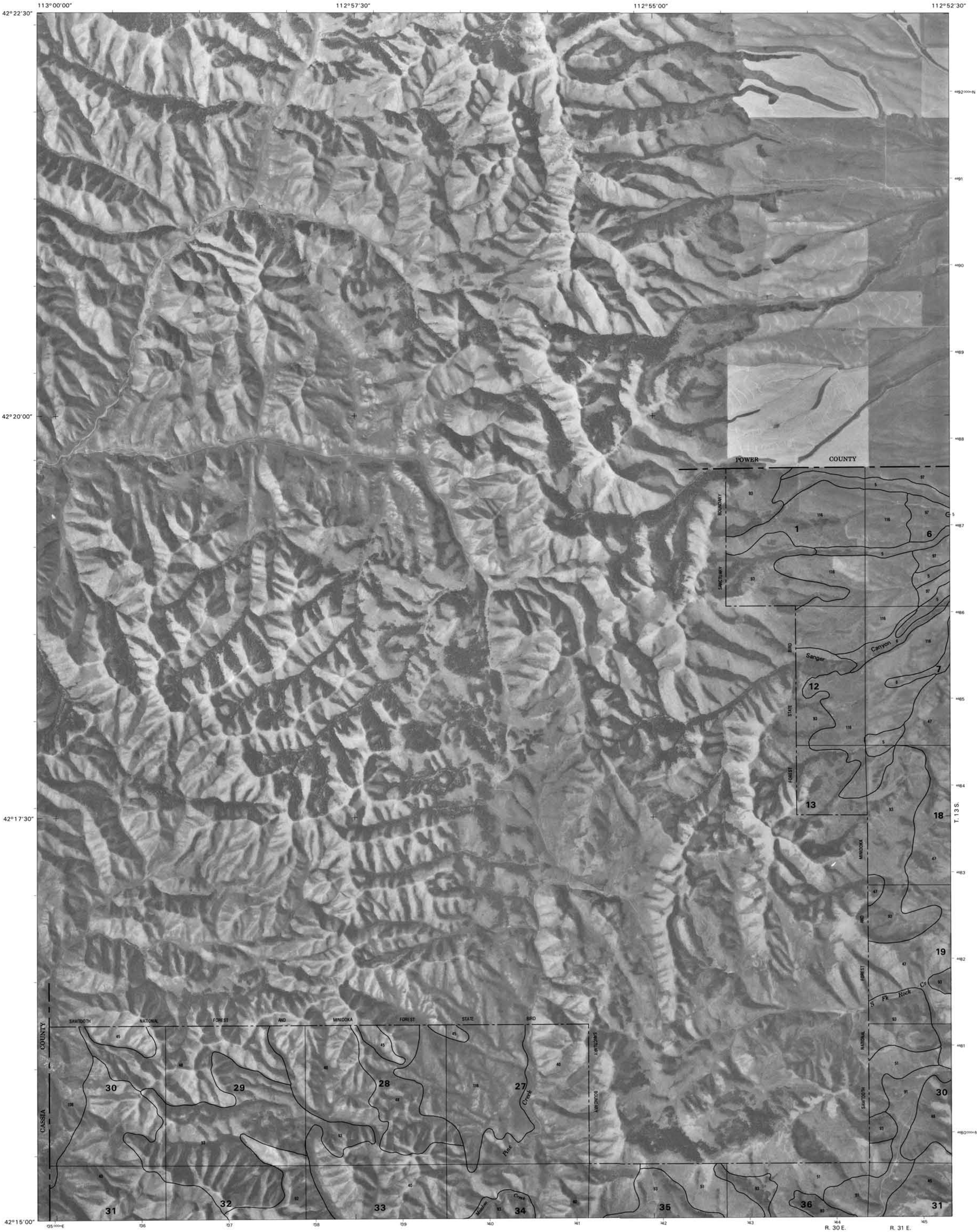
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1	2	3	1 BRADLEY MOUNTAIN
			2 HAWKINS
4		5	3 ARIMO
			4 DAIRY CREEK
6	7	8	5 DOWNEY WEST
			6 DANIELS
			7 ELKHORN PEAK
			8 MALAD SUMMIT

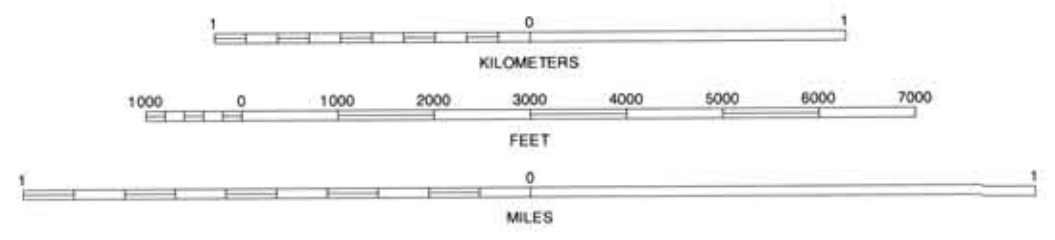
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WAKLEY PEAK, IDAHO
7.5 MINUTE SERIES
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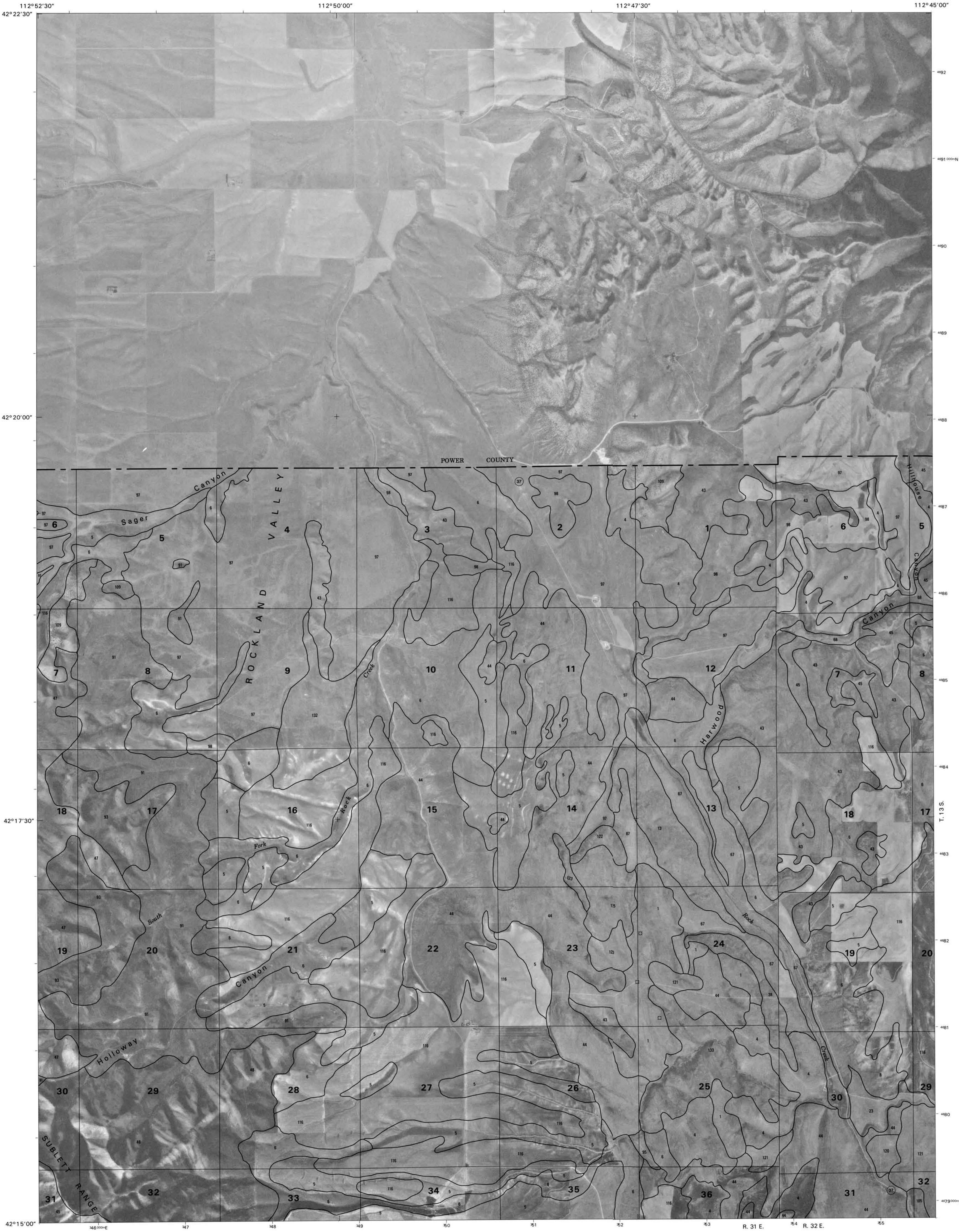
North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



1	2	3	1 NORTH HEGLAR CANYON
4		5	2 HARTLEY PEAK
6	7	8	3 ROYNE
			4 SUBLETT RESERVOIR
			5 ROY
			6 SWEETZER CANYON
			7 JUNIPER
			8 BADGER HOLE SPRING

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SUBLETT TROUGHS, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 6 OF 28

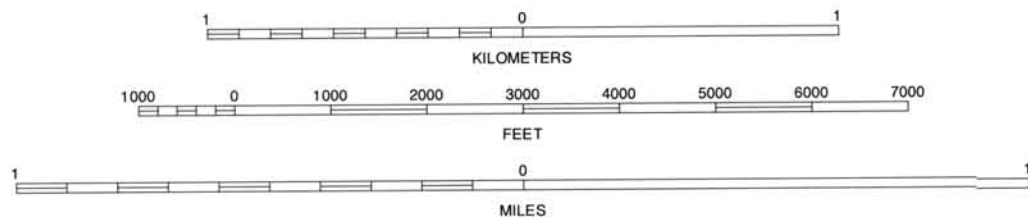


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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



1	2	3
4	5	6
7	8	9

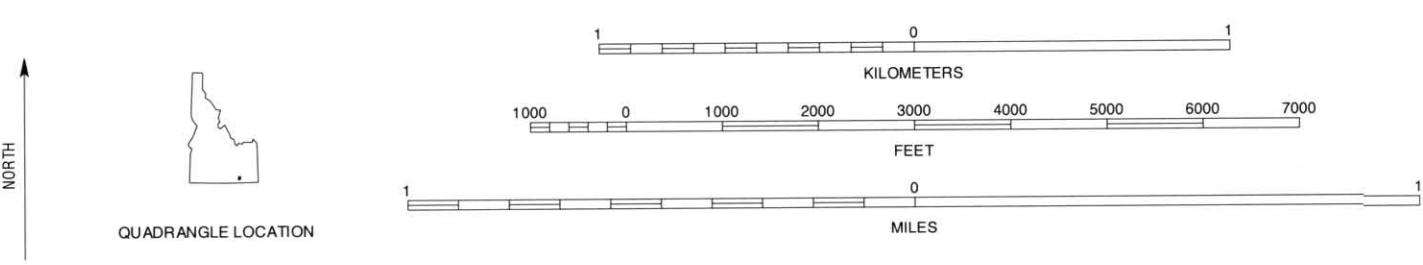
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ROY, IDAHO
7.5 MINUTE SERIES
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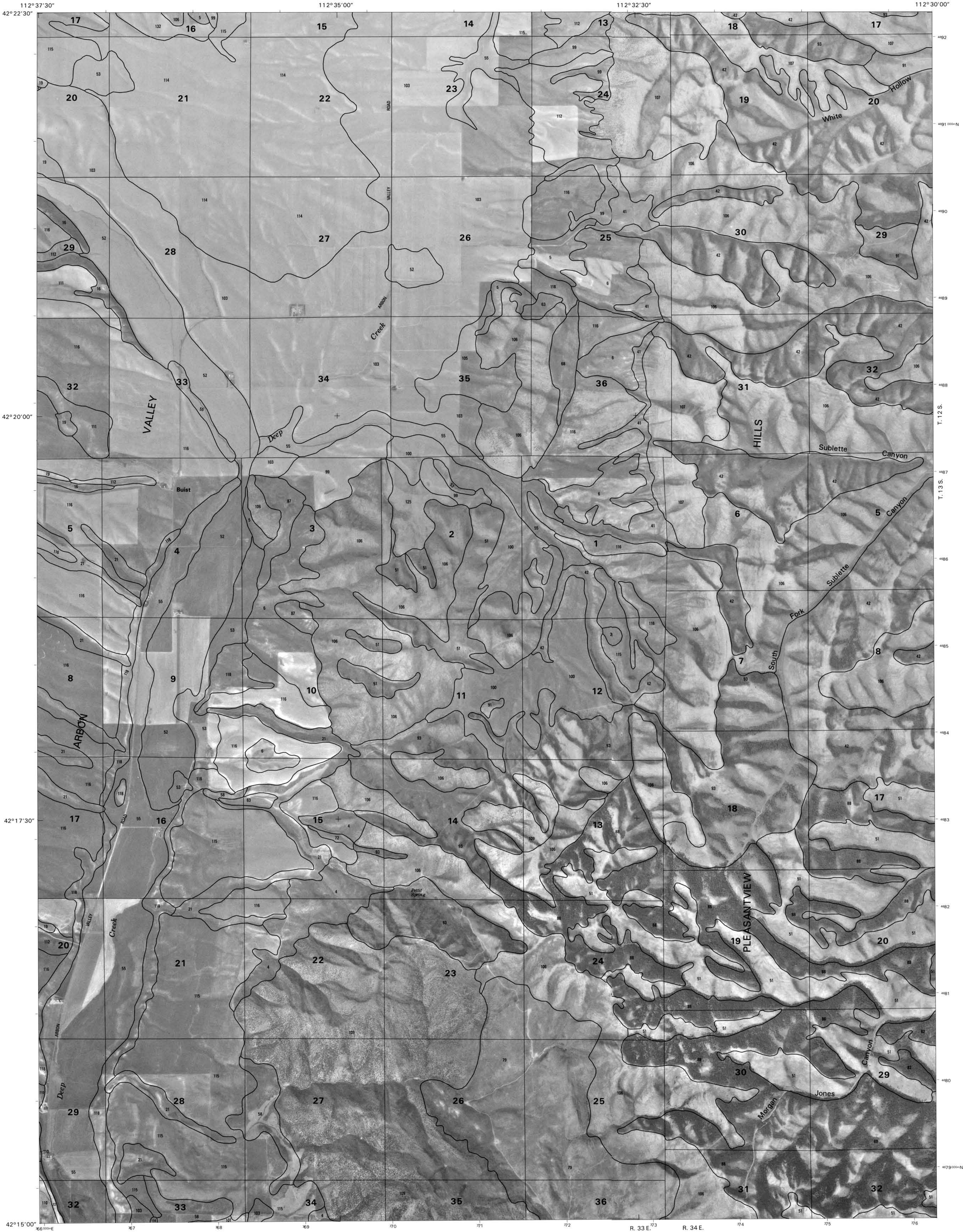
North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



1	2	3	1 ROYNE
			2 DEEP CREEK PEAK
			3 ARBON
4		5	4 ROY
			5 BUJST
			6 BADGER HOLE SPRING
			7 HOLBROOK
6	7	8	8 SHEEP CREEK SPRING

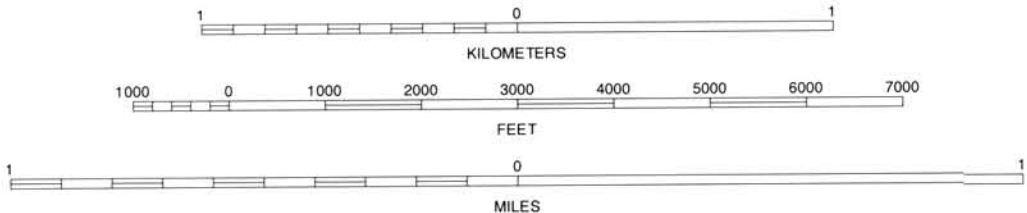
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CEDARHILL, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 8 OF 28



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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



1	2	3
4	5	6
7	8	

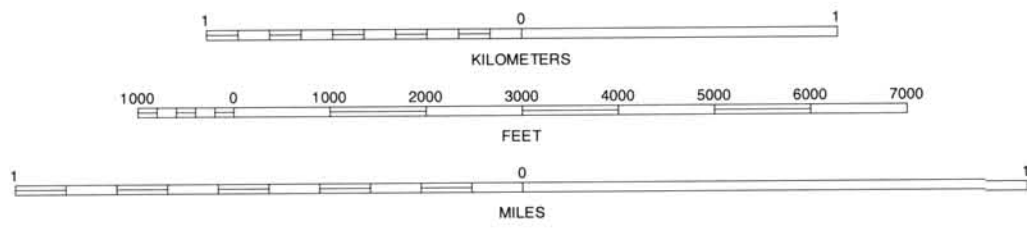
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BUIST, IDAHO
7.5 MINUTE SERIES
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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



1	2	3	1 ARBON
			2 DAIRY CREEK
			3 WAKLEY PEAK
4		5	4 BUIST
			5 ELKHORN PEAK
			6 SHEEP CREEK SPRING
6	7	8	7 IRELAND SPRINGS
			8 MALAD CITY WEST

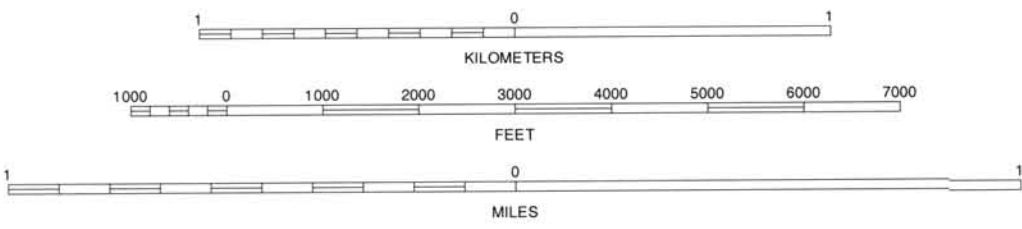
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DANIELS, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 10 OF 28



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Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

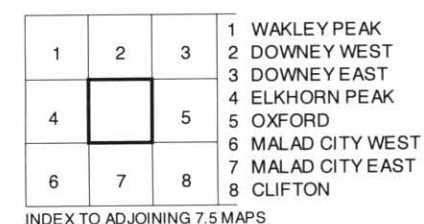


1	2	3	1 DAIRY CREEK
4	5	6	2 WAKLEY PEAK
7	8	9	3 DOWNEY WEST
10	11	12	4 DANIELS
13	14	15	5 MALAD SUMMIT
16	17	18	6 IRELAND SPRINGS
19	20	21	7 MALAD CITY WEST
22	23	24	8 MALAD CITY EAST

ELKHORN PEAK, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 11 OF 28

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ONEIDA COUNTY AREA, IDAHO
MALAD SUMMIT QUADRANGLE
SHEET NUMBER 12 OF 28



MALAD SUMMIT, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 12 OF 28



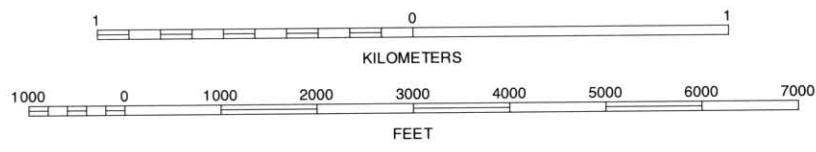
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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION

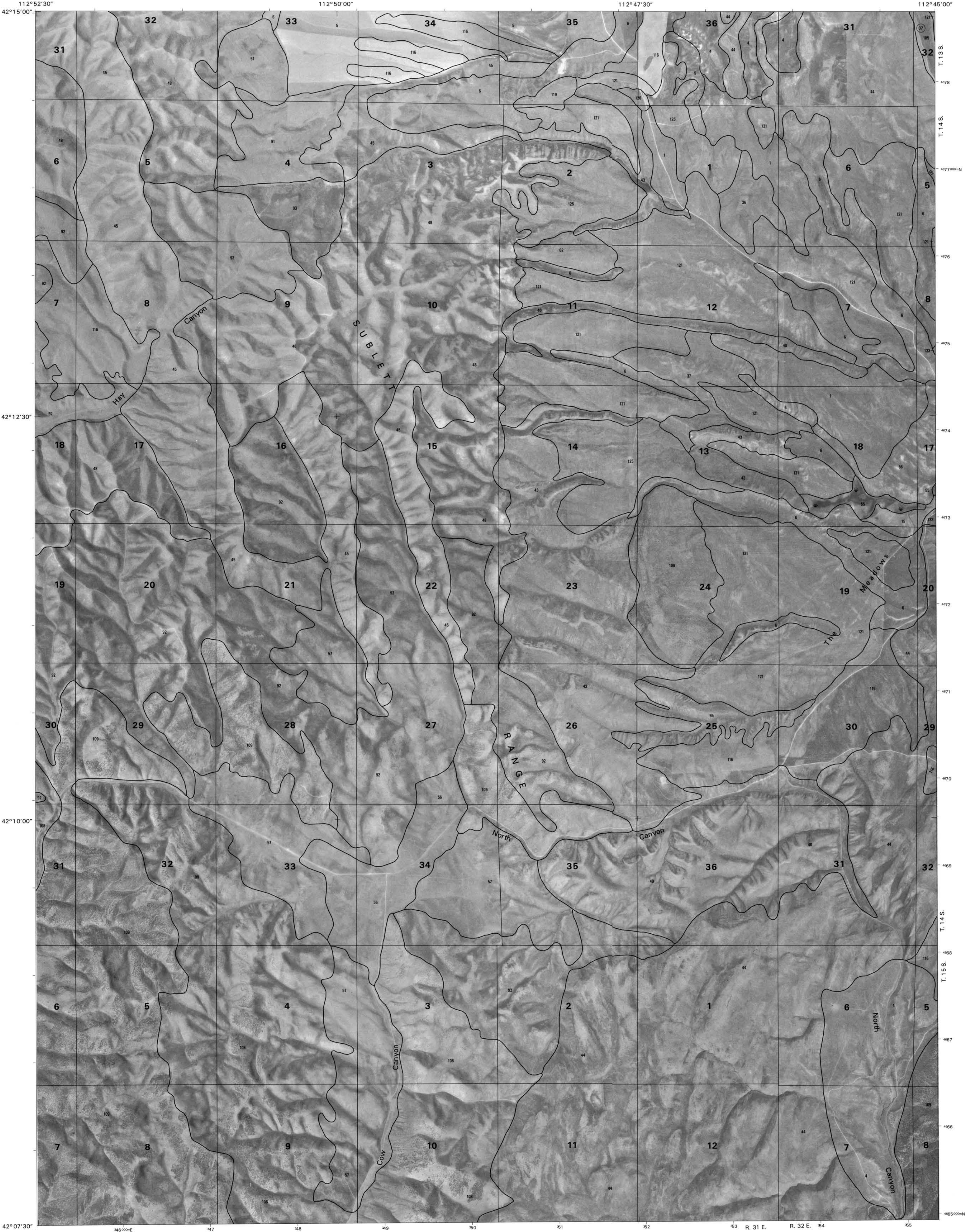


1	2	3	1 SUBLETT RESERVOIR
			2 SUBLETT TROUGHS
			3 ROY
4		5	4 SWEETZER CANYON
			5 BADGER HOLE SPRING
6	7	8	6 BLACK PINE PEAK
			7 BLACK PINE
			8 THE COVE

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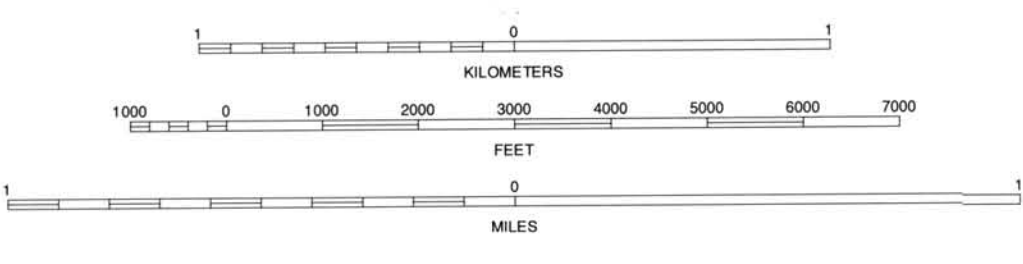
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JUNIPER, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 13 OF 28



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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



1	2	3	1 SUBLETT TROUGHS
			2 ROY
			3 CEDARHILL
4		5	4 JUNIPER
			5 HOLBROOK
			6 BLACK PINE
6	7	8	7 THE COVE
			8 STONE

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INDEX TO ADJOINING 7.5 MAPS

BADGER HOLE SPRING, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 14 OF 28

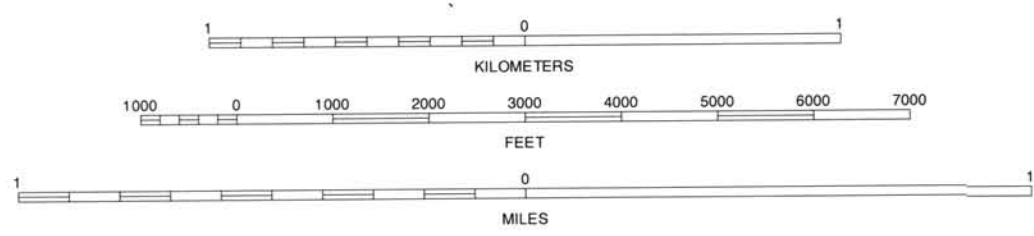


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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



1	2	3	1 ROY
4	5	6	2 CEDARHILL
7	8	9	3 BUIST
10	11	12	4 BADGER HOLE SPRING
13	14	15	5 SHEEP CREEK SPRING
16	17	18	6 THE COVE
19	20	21	7 STONE
22	23	24	8 CO-OP SPRING

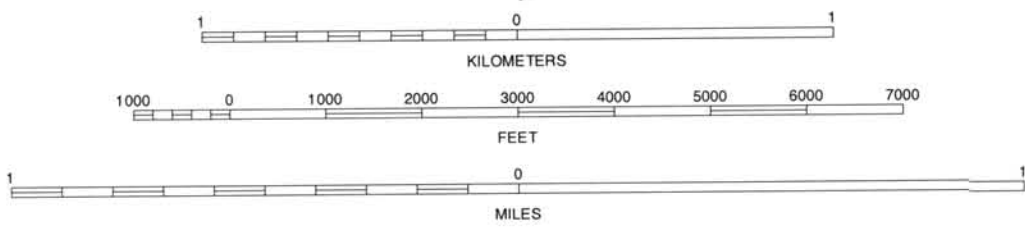
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HOLBROOK, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 15 OF 28



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1992 and 1993 aerial photography.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



1	2	3	1 CEDARHILL
			2 BUIST
			3 DANIELS
4		5	4 HOLBROOK
			5 IRELAND SPRINGS
			6 STONE
6	7	8	7 CO-OP SPRING
			8 GROVER CANYON

INDEX TO ADJOINING 7.5 MAPS

SHEEP CREEK SPRING, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 16 OF 28

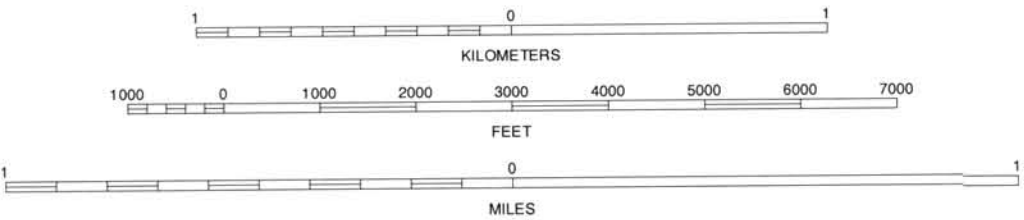


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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



1	2	3	1 BUIST
			2 DANIELS
			3 ELKHORN PEAK
4		5	4 SHEEP CREEK SPRING
			5 MALAD CITY WEST
			6 CO-OP SPRING
6	7	8	7 GROVER CANYON
			8 SAMARIA

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IRELAND SPRINGS, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 17 OF 28

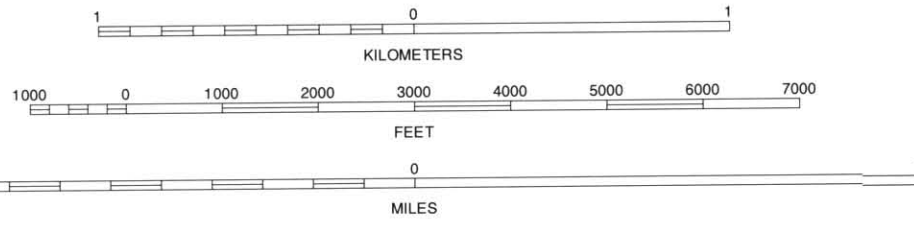


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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



1	2	3	1 DANIELS
4		5	2 ELKHORN PEAK
6	7	8	3 MALAD SUMMIT
			4 IRELAND SPRINGS
			5 MALAD CITY EAST
			6 GROVER CANYON
			7 SAMARIA
			8 HENDERSON CREEK

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INDEX TO ADJOINING 7.5 MINUTE MAPS

MALAD CITY WEST, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 18 OF 28

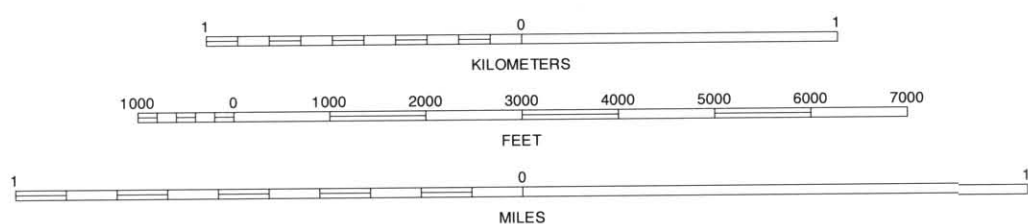


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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



1	2	3	1 ELKHORN PEAK
			2 MALAD SUMMIT
			3 OXFORD
4		5	4 MALAD CITY WEST
			5 CLIFTON
			6 SAMARIA
6	7	8	7 HENDERSON CREEK
			8 WESTON CANYON

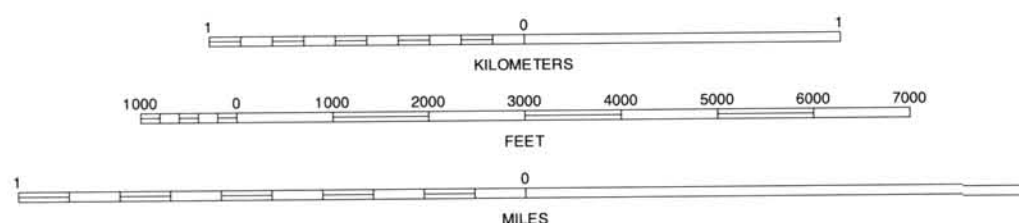
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MALAD CITY EAST, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 19 OF 28



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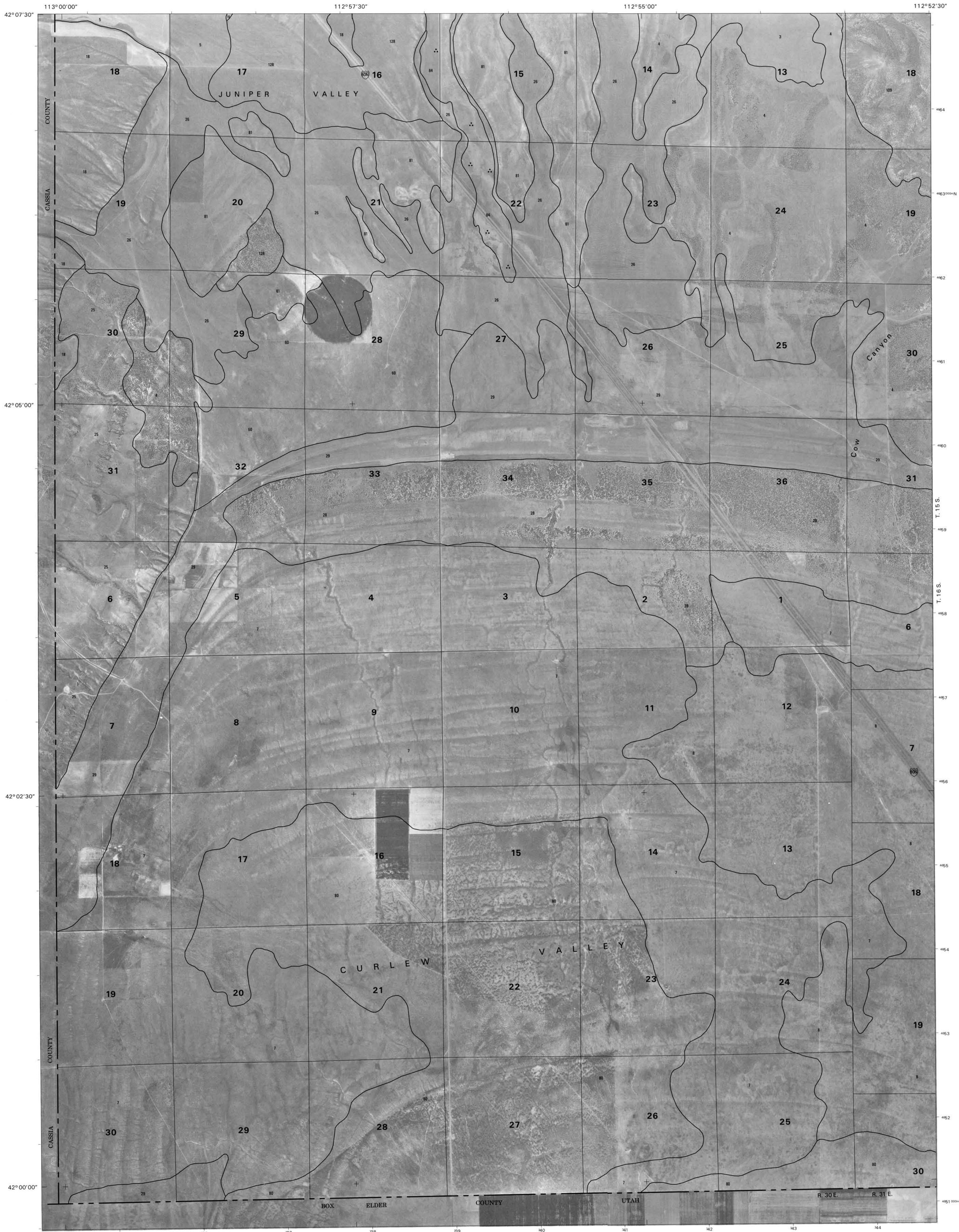
North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



1	2	3	1 MALAD SUMMIT
4	5	6	2 OXFORD
7	8	9	3 SWAN LAKE
			4 MALAD CITY EAST
			5 BANIDA
			6 HENDERSON CREEK
			7 WESTON CANYON
			8 WESTON

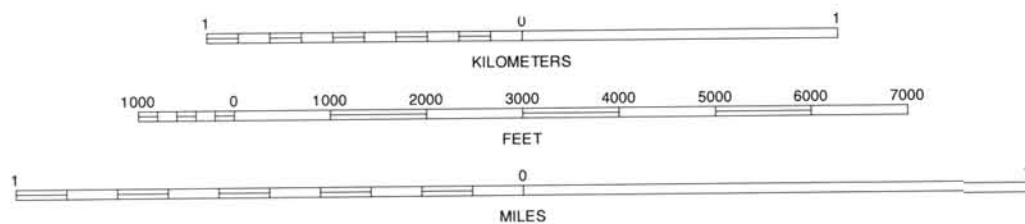
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CLIFTON, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 20 OF 28



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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



1	2	3
4	5	6
7	8	9

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BLACK PINE, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 21 OF 28

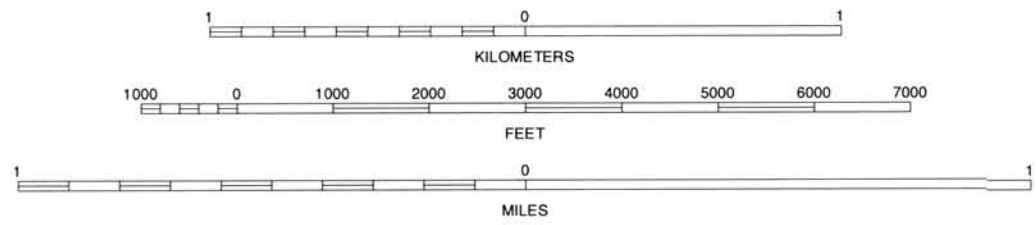


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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



1	2	3
4	5	6
7	8	9

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THE COVE, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 22 OF 28

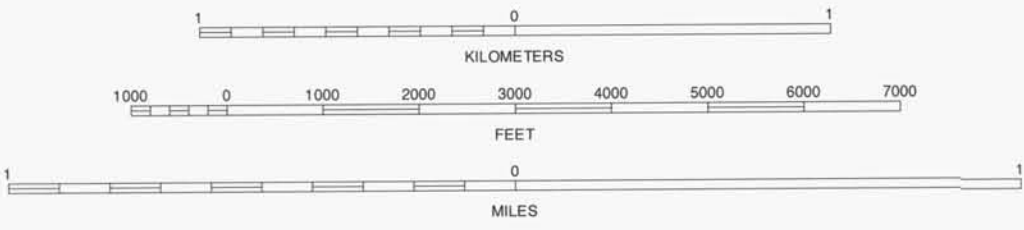


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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION



1	2	3	1 BADGER HOLE SPRING
			2 HOLBROOK
			3 SHEEP CREEK SPRING
4		5	4 THE COVE
			5 CO-OP SPRING
			6 MONUMENT PEAK NE
6	7	8	7 SNOWVILLE
			8 RATTLE SNAKE PASS

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STONE, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 23 OF 28



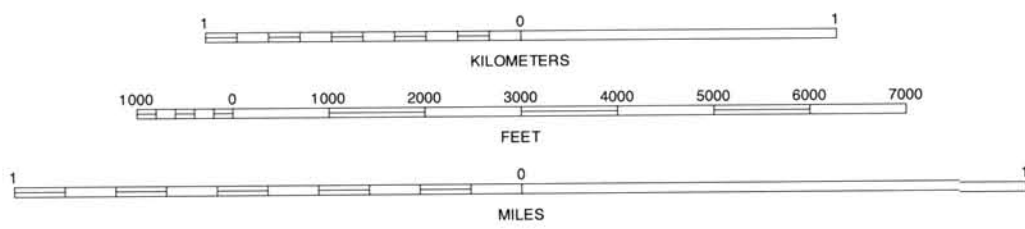
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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION

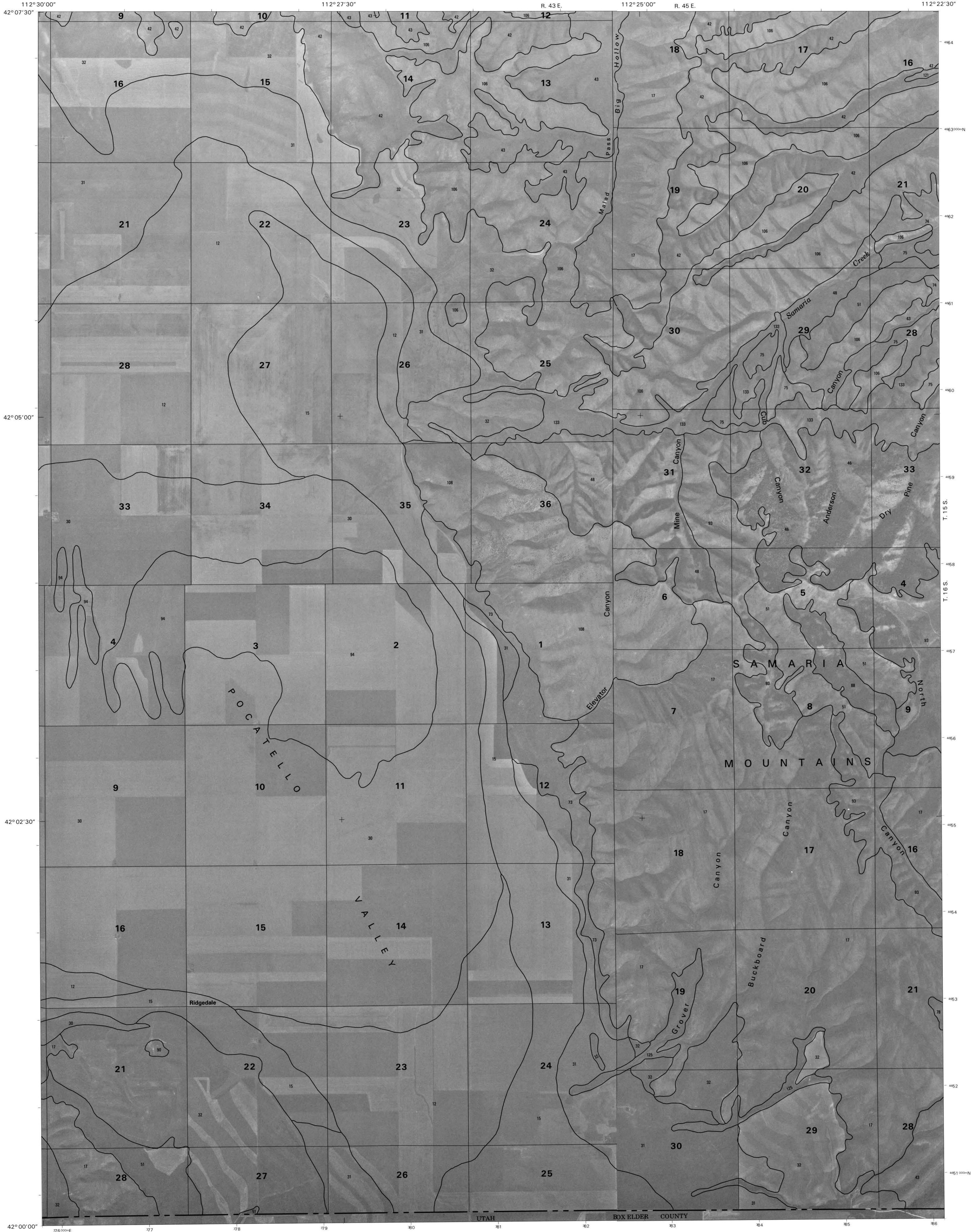


1	2	3	1 HOLBROOK
4		5	2 SHEEP CREEK SPRING
6	7	8	3 IRELAND SPRINGS
			4 STONE
			5 GROVER CANYON
			6 SNOWVILLE
			7 RATTLESNAKE PASS
			8 RIDGEDALE PASS

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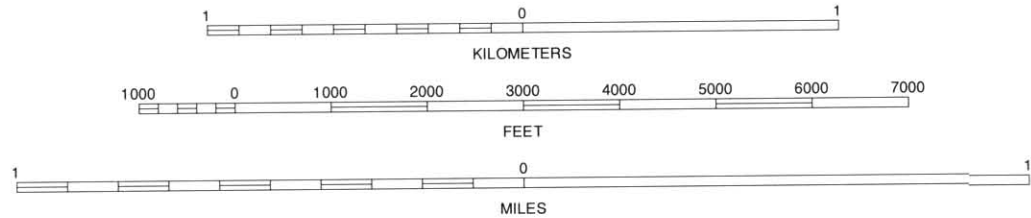
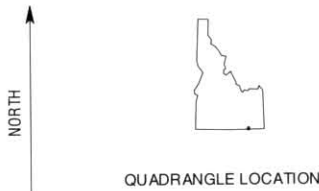
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CO-OP SPRING, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 24 OF 28



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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



1	2	3
4	5	6
7	8	9

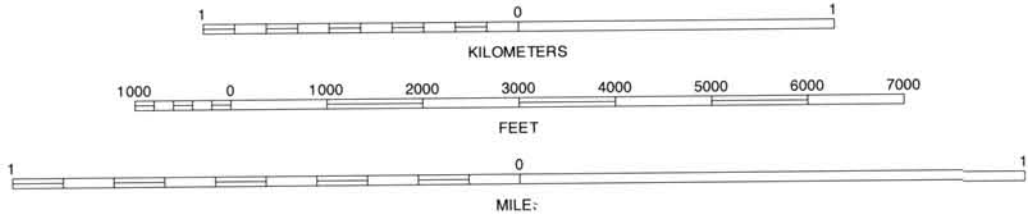
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GROVER CANYON, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 25 OF 28



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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1,000-meter ticks; Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



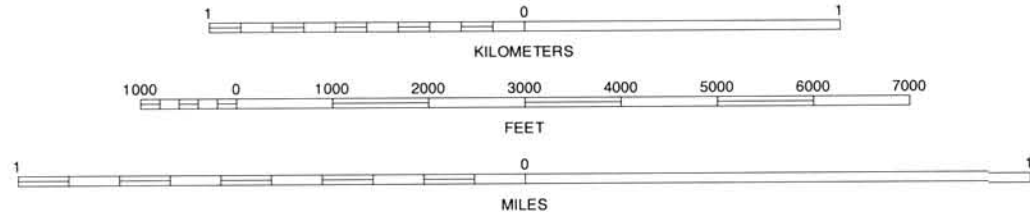
1	2	3	1 IRELAND SPRINGS
4	5	2 MALAD CITY WEST	
6	7	3 MALAD CITY EAST	
		4 GROVER CANYON	
		5 HENDERSON CREEK	
		6 RIDGEDALE PASS	
		7 LIMEKILN KNOLL	
		8 PORTAGE	

SAMARIA, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 26 OF 28



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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



1	2	3
4	5	6
7	8	

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HENDERSON CREEK, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 27 OF 28



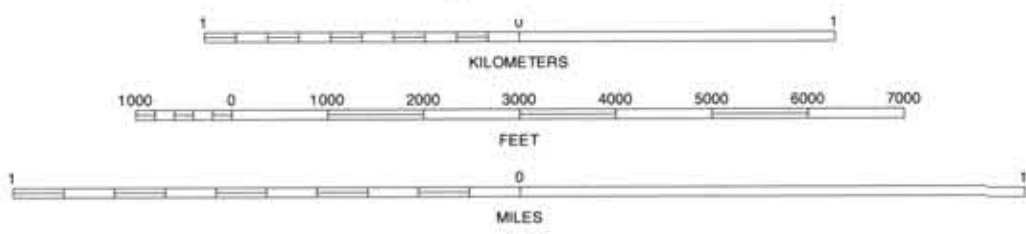
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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 12. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUADRANGLE LOCATION



1	2	3	1 MALAD CITY EAST
4	5	6	2 CLIFTON
7	8	9	3 BANIDA
			4 HENDERSON CREEK
			5 WESTON
			6 PORTAGE
			7 CLARKSTON
			8 TRENTON

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WESTON CANYON, IDAHO
7.5 MINUTE SERIES
SHEET NUMBER 28 OF 28